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O-2A AIRCRAFT SEA FLIGHT LOADS RECORDING PROGRAM

F. J. PEPH GIESSLER

JOHN F. NASH

TECHNOLOGY INCORPORATED

TECHNICAL REPORT ASD-TR-71-36

JUNE 1971

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AERONAUTICAL SYSTEMS DIVISION
AIR FORCE SYSTEMS COMMAND
WRIGHT-PATTERSON AIR FORCE BASE, OHIO

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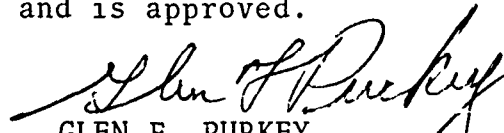
FOREWORD

Technology Incorporated, Dayton, Ohio, prepared this report to cover the services rendered in a flight loads recording program on O-2A aircraft operating at two Southeast Asia air bases. These services consisted of installing recording systems, recording data, and in-house processing and documentation of the data.

This report was authorized under Contract F33657-70-C-0939 and sponsored by the Combat System Program Office (ASD/SDQS), Aeronautical Systems Division, Wright-Patterson Air Force Base, Ohio. Major Hugh O'Neal, Mr. Guy Chambers, and Mr. Charles Campbell, of the Combat Systems Program Office, have been the Air Force contract monitors. Captains Brian Archer and John Parr, of the Structures Division (ASD/ENFSL), have provided engineering support. Key personnel of Technology Incorporated engaged in the data acquisition and processing phases of this program include Mr. Henry C. Pender, project manager; Mr. John F. Nash, data processing supervisor; Mr. William E. Morrin, computer programmer; and Mr. F. Joseph Giessler, aeronautical engineer.

Appreciation is expressed to the personnel of the United States Air Force who assisted in this program.

This report has been reviewed and is approved.


GLEN F. PURKEY
Chief, Structures Division
Directorate of Airframe
Subsystems Engineering

ABSTRACT

Between June 1970 and January 1971 twenty-one O-2A aircraft operating from DaNang and Bien Hoa Air Bases, Republic of Viet Nam, were each equipped with either a VGH or a multichannel recording system to establish maneuver and gust loads spectra for the O-2A aircraft operating under combat conditions. Of the 2053 hours of valid data documented in this report, all represent VGH data (airspeed, altitude, and c.g. vertical acceleration) and 708 represent multichannel data (the foregoing parameters plus pitch and roll angular rates). The data presentation includes tables and graphs of the parameters in the form of histograms, exceedance plots, and bivariate and trivariate tables. The tables list the number of parameter peaks occurring in the ranges of the given parameter and the coincident ranges of other parameters and the time spent in the coincident ranges of several parameters. Data recorded during store drops were processed separately to reflect aircraft operation during weapon deliveries. Of the 428 rocket passes recorded, 272 had acceleration peaks between 2.0g and 3.0g and only 27 had peaks over 3.5g. The instrumented aircraft, on the average, exceeded the maneuver load factor of 4.0 every 300 hours.

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1. INTRODUCTION

To establish maneuver and gust loads spectra for the O-2A aircraft operating under combat conditions in Vietnam, a concurrent VGH and multichannel flight loads recording program was inaugurated in mid 1970. Using an oscillograph recording system as the data acquisition medium, 2053 hours of valid data, of which 708 hours were multichannel data, were collected between 17 June 1970 and 10 January 1971 on twenty-one O-2A's assigned to DaNang and Bien Hoa Air Bases, Republic of Viet Nam. The VGH data included the conventional airspeed, altitude, and center-of-gravity vertical acceleration--all correlated in time; in addition, all store drops were monitored. The multichannel data included pitch and roll angular rates as well as the VGH and store drop data.

The O-2A, shown in Figure 1, is a military version of the Model 337 Super Skymaster manufactured by the Cessna Aircraft Company. The airplane is a high-wing, all-metal monoplane with retractable tricycle landing gear and two reciprocating engines in a push-pull arrangement. The empennage is characterized by twin tail booms. Four wing pylons, two under each wing, can carry an assortment of bombs, rockets, flares, and machine guns. The pylons, however, generally carry only smoke rockets or flares for marking targets.

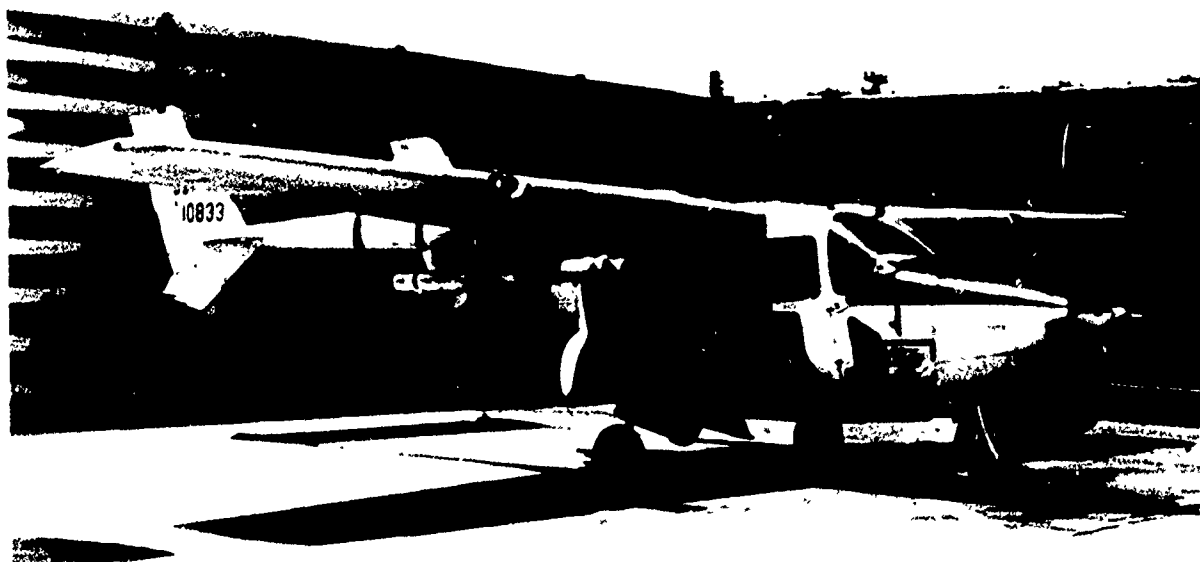


Figure 1. View of the O-2A Aircraft

The instrumented aircraft at both Bien Hoa and DaNang performed both day and night flights which were classified as either "Combat" or "Other" according to the mission designation in the pilot's log. Although no additional mission breakdown was reported, Combat flights included such missions as forward air

control (FAC) and visual reconnaissance; and Other flights included such missions as training, maintenance test, and administrative functions.

The FAC mission was designed to locate enemy positions and then to mark them with either smoke rockets or flares to guide fighter-bomber attacks. Normally, the aircraft configuration for the daytime performance of these missions consisted of a full load of fuel and a LAU 59/A rocket launcher with seven 2.75-inch rockets on each outboard pylon. The inboard pylons were normally empty. In the nighttime performance of these missions from Bien Hoa, the configuration usually had a LAU 59/A with six or seven rockets on the left outboard pylon, a B37 K-1 rack with three or four MK-24 flares on the right outboard pylon, and an MK-24 flare on each of the inboard pylons. Variations of these configurations included (1) B37 K-1 racks on both outboard pylons with an MK-24 flare on the inboard pylons, and (2) LAU 59/A rocket launchers on the inboard pylons with the outboard pylons empty. The various configurations noted during the recording period are detailed later in this report.

To present the data reflecting the maneuver and gust load spectra, the data processing consisted of determining the frequency of vertical acceleration peaks in load factor ranges versus the coincident ranges of selected parameters and then preparing tables and graphs most illustrative of the frequency distributions. Such data are used to define the operational usage of the aircraft throughout the characteristic mission profile, to determine the maneuver and gust environment encountered by the aircraft, and to provide design criteria for future observation aircraft.

In this program, Technology Incorporated was responsible for three discrete phases: (1) the design, fabrication, laboratory calibration, and initial installation of the recording systems; (2) the maintenance, preflight calibration, repair, and progressive reinstallation of the recording systems and the collection of the specified data; and (3) the processing and documentation of all valid data acquired. This report briefly describes the recording system, the aircraft instrumentation, and data collection; thoroughly defines the specifications for three parameter categories; that is, supplemental data, recorded, and calculated parameters; explains the data processing techniques and procedures for data editing and digitizing, quality control, computer processing, and data acceptance; presents the final data in graphic and tabular form; and finally summarizes and draws conclusions on significant aspects of the data.

2. RECORDING SYSTEMS

The description, principles, and operation of the VGH and multichannel recording systems employed in this program are presented in detail in Reference 1. The VGH system measured differential pressure (airspeed), static pressure (altitude), and vertical acceleration at the aircraft's center of gravity; monitored the transducer excitation voltage and the store releases; and generated a constant-period marking for time reference and two static lines for reading references. The constant-period marking consisted of a cycling 30-second on-and-off trace. To indicate the position of each released store, the trace monitoring the external stores momentarily deflected a calibrated distance at release and then returned to a static level. In addition to the foregoing functions, the multichannel system measured the angular rates of pitch and roll at the aircraft's center of gravity.

The major components in each recording system were a Century oscillograph recorder, a bridge control unit (two for the multichannel system), and the transducers. Except for the angular rate gyros and the store-release monitor, all transducers were of the strain gage type and were wired in a bridge circuit configuration. The rate gyros were of the potentiometer type and required an additional resistor network in the bridge control unit to incorporate them in a bridge circuit configuration. Reference 1 details the laboratory and preflight calibration of the transducers.

At the beginning of the program, the recording systems consisted of a Century Model 414A35 oscillograph recorder in each VGH system and a Century Model 409H oscillograph recorder in each multichannel system. With a 70-foot oscillogram magazine and a fixed recording speed of 3 inches a minute, the Model 414 could record about 4 hours and 40 minutes of continuous in-flight data. Two sizes of oscillogram magazines were provided for the Model 409: one with a 150-foot and the second with a 400-foot capacity. With a fixed recording speed of 6 inches a minute, these magazines had the capacity for recording about 5 and 13 hours, respectively, of continuous in-flight data. All Model 414 recorders were replaced by Model 409 recorders during the third month of the program to increase the recording capacity.

3. AIRCRAFT INSTRUMENTATION

Original aircraft instrumentation plans called for the installation of recording systems in four O-2A's at each of the two air bases, Bien Hoa and DaNang. At each base, two aircraft were equipped with VGH systems and two with multichannel systems. The initial installations were completed between 16 and 25 June 1970 (see Table I). Because of aircraft reassignment and extended downtime for maintenance, considerable removals and reinstallations

of the recording systems were required. By the completion of the program, a total of twenty-one aircraft had been instrumented including one a second time. For each instrumented aircraft, Table I lists by base the aircraft serial number, the recording system installation and removal dates, and the airframe time logged during the instrumentation period. All recording systems were removed by 10 January 1971.

The block diagrams in Figure 2 illustrate the functional integration and operation of the major components making up each system. The two-view outline drawings of the O-2A in Figure 3 indicate the approximate installation positions of the major components in each system. Further information on the recording systems is contained in References 1 and 2.

TABLE I
Summary of Aircraft Instrumentation

Air Base	A/C Serial Nr	Instrumentation Dates		Airframe Time (hr)
		Installation	Removal	
Bien Hoa	68-10996	16 Jun 70	8 Sep 70	169
Bien Hoa	68-10998	18 Jun 70	8 Sep 70	156
Bien Hoa	68-10847*	18 Jun 70	8 Jul 70	163
Bien Hoa	68-11048*	17 Jun 70	6 Sep 70	102
Bien Hoa	68-10993#*	31 Jul 70	2 Sep 70	85
Bien Hoa	68-10860	10 Sep 70	10 Jan 71	328
Bien Hoa	68-10835	10 Sep 70	23 Nov 70	150
Bien Hoa	68-10839*	9 Sep 70	1 Oct 70	45
Bien Hoa	68-10842*	24 Oct 70	10 Jan 71	189
Bien Hoa	68-10989*	10 Sep 70	8 Dec 70	234
Bien Hoa	68-10990*	26 Nov 70	5 Jan 71	46
Bien Hoa	68-10993#*	8 Dec 70	8 Jan 71	51
Total				1718
Da Nang	68-10973*	24 Jun 70	12 Dec 70	503
Da Nang	68-10856*	24 Jun 70	11 Nov 70	222
Da Nang	68-10833	25 Jun 70	12 Sep 70	206
Da Nang	68-11008	25 Jun 70	30 Nov 70	434
Da Nang	68-11009	15 Sep 70	31 Dec 70	234
Da Nang	68-11001	30 Nov 70	23 Dec 70	44
Da Nang	68-10861*	11 Nov 70	17 Dec 70	106
Da Nang	68-11060*	12 Dec 70	10 Jan 71	110
Da Nang	68-6882	17 Dec 70	5 Jan 71	35
Da Nang	68-6875*	23 Dec 70	8 Jan 71	18
Total				1912
Grand Total				3630

* Multichannel Recording System

A/C Serial Nr 68-10993 was instrumented twice.

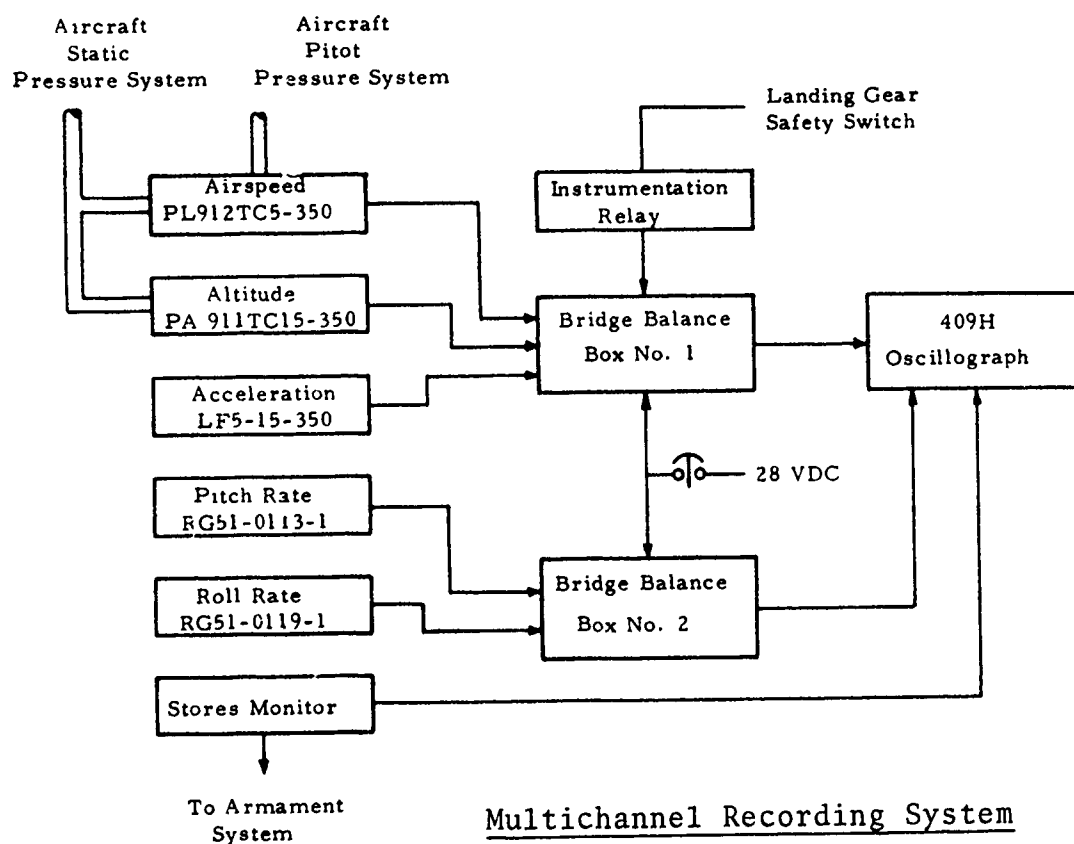
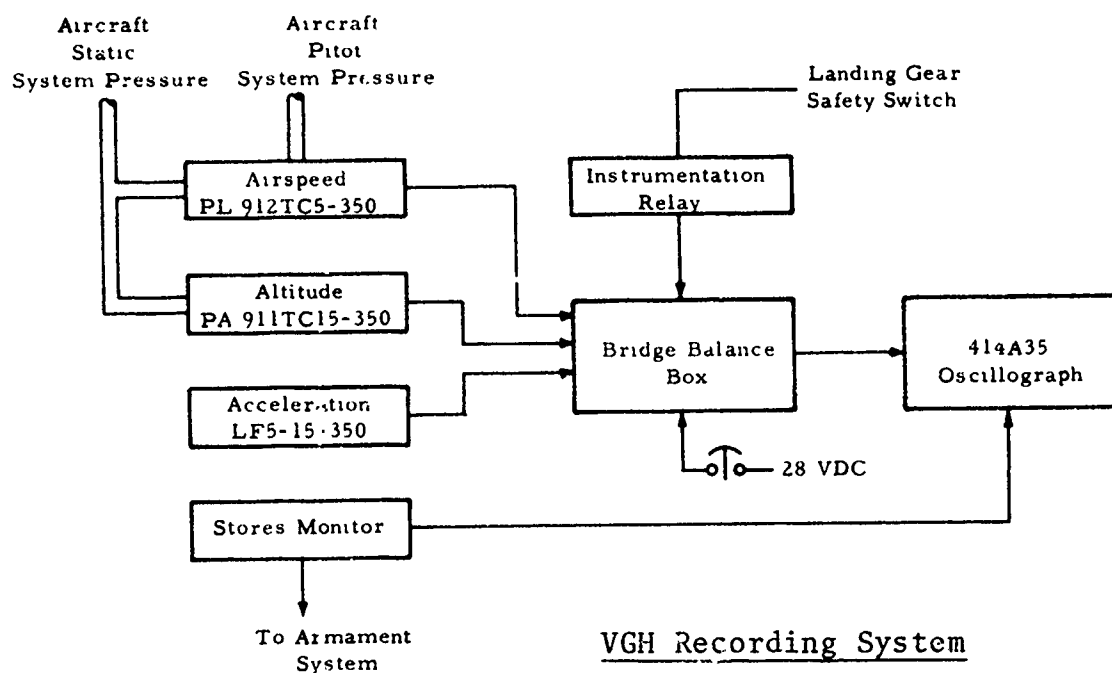


Figure 2. Functional Block Diagrams of the O-2A Recording Systems

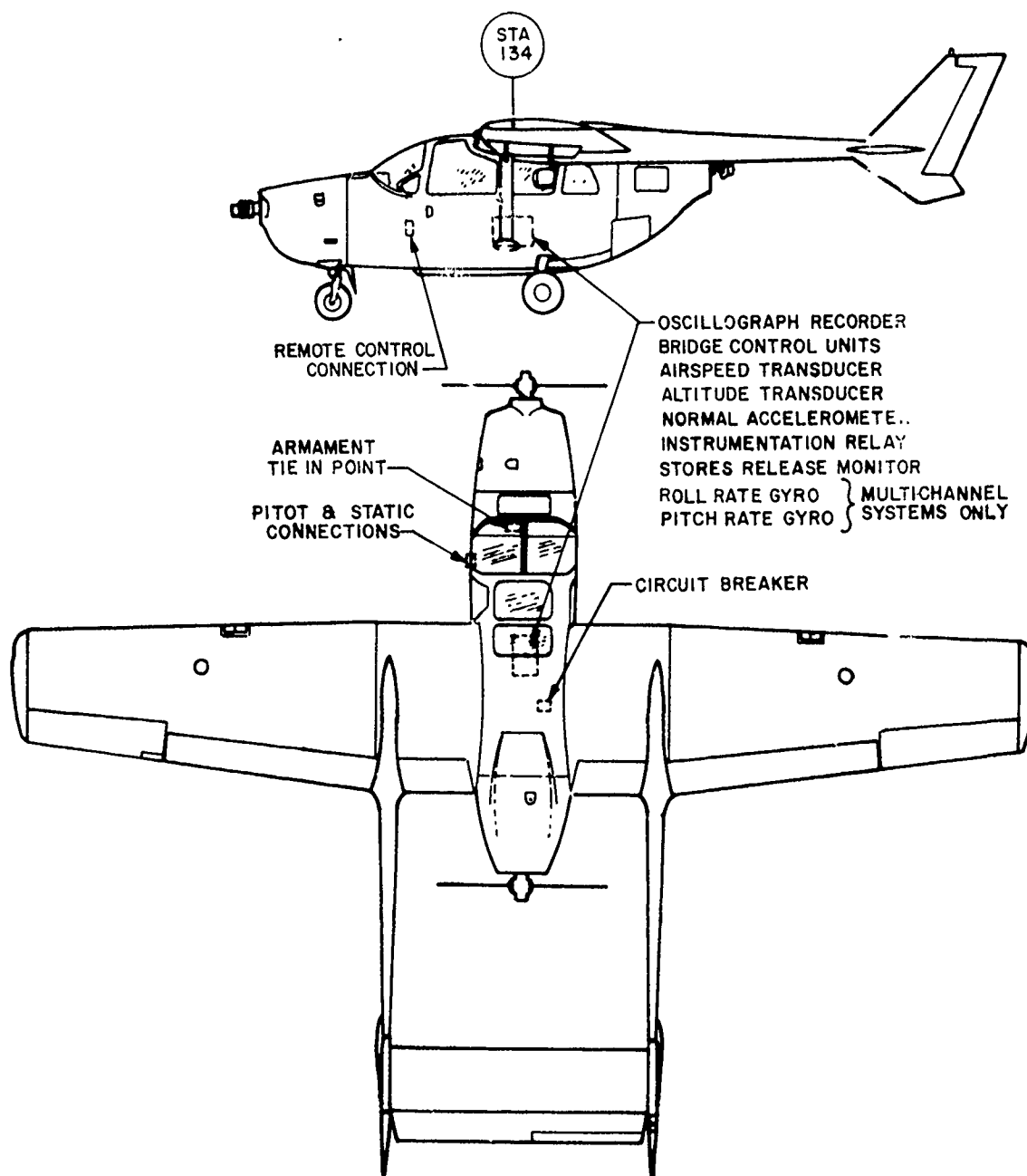


Figure 3. Outline Drawing of O-2A Aircraft Indicating Approximate Positions of Major Components in VGH and Multichannel Recording Systems

4. DATA COLLECTION

As initially specified by the contract, 1200 hours of valid VGH data and 800 hours of valid multichannel data, equally distributed between the two bases, were to be collected during a 6-month data acquisition period. However, various developments beyond the contractor's control prevented the achievement of the original data requirement: Apparent reductions in operational schedules and recording system removals and reinstallations because of aircraft maintenance and reassignment caused the data recording rate to be less than that anticipated. To compensate for the reduced data recording rate, the recording period was extended from 6 to 7 months; the data requirement was reduced to 1700 hours of valid data, of which 40 percent were to be multichannel data; and various measures to increase the data recording, such as the addition of a ninth aircraft to the prescribed group of eight instrumented aircraft, were implemented.

Ultimately, as listed in Table II, 2053 hours of valid data, including 708 hours of multichannel data, were collected. For each of the instrumented aircraft, this table lists the number of recorded flights, the logged flight time, and the hours of recorded data with a breakdown by valid and unusable data. The unusable data had at least one parameter that was not recorded properly. As indicated, some of the aircraft equipped with multichannel recorders yielded data whose angular rate parameters were unusable but whose VGH data was valid and included in the VGH sample.

Table II also indicates that 1179 of the 3630 hours of logged airframe time were not recorded. Before accounting for these hours, the 1179 should first be reduced by 177, an estimate of the total overlog time, that is, about 5 percent of the logged airframe time. The overlog time is the difference between the logged airframe time and the recorded flight time which covered only from liftoff to touchdown. Of the remaining 1002 hours, 170 were not recorded because some expended oscillograms could not be replaced while aircraft operated from a forward base; an additional 537 were not recorded because some recording systems were inoperative; and finally 295 were not recorded because the flight or maintenance personnel had apparently pulled the circuit breakers in the recording systems.

Besides the in-flight data, supplemental mission data was needed to complete the processing of the flight data. To collect such data, field technicians completed the form shown in Figure 4. As seen here, the supplemental data included such information as aircraft serial number; flight date; mission type; type and deployment of external stores; and time, base, barometric pressure, and fuel and aircraft weight at both takeoff and landing.

TABLE II
Summary of Data Recording

Air Base	A/C Serial Nr	Airframe Time (hr)	Recorded Data		Valid VGH		Valid Multi		Invalid	
			Time (hr)	Flts	Hr	Flts	Hr	Flts	Hr	Flts
Bien Hoa	68-10996	169	108.8	43	90.5	36	3.4	1	14.9	6
Bien Hoa	68-10998	156	78.6	43	66.4	37	--	--	12.2	6
Bien Hoa	68-10847*	163	128.0	49	32.3	11	95.7	38	--	--
Bien Hoa	68-11048*	102	59.3	26	3.0	1	40.8	19	15.5	6
Bien Hoa	68-10993*	85	73.8	29	45.7	20	3.1	1	25.0	8
Bien Hoa	68-10860	328	272.4	67	262.5	65	--	--	9.9	2
Bien Hoa	68-10835	150	125.8	35	112.8	32	--	--	13.0	3
Bien Hoa	68-10839*	45	35.8	11	8.6	2	27.2	9	--	--
Bien Hoa	68-10842*	189	120.0	33	7.0	3	--	--	113.0	30
Bien Hoa	68-10989*	234	186.8	54	70.3	19	116.5	35	--	--
Bien Hoa	68-10990*	46	13.5	6	--	--	8.1	3	5.4	3
Bien Hoa	68-10993*	51	25.9	11	2.8	2	23.1	9	--	--
Total		1718	1228.7	407	701.9	228	317.9	115	208.9	64
Da Nang	68-10973*	503	240.5	80	31.4	11	190.6	61	18.5	8
Da Nang	68-10856*	222	170.4	76	91.4	40	58.7	21	20.3	15
Da Nang	68-10833	206	88.4	46	51.5	34	--	--	36.9	12
Da Nang	68-11008	434	285.0	130	243.5	113	--	--	41.5	17
Da Nang	68-11009	234	176.9	72	127.0	55	--	--	49.9	17
Da Nang	68-11001	44	37.7	11	34.0	10	--	--	3.7	1
Da Nang	68-10861*	106	91.6	40	2.8	1	79.5	36	9.3	3
Da Nang	68-11060*	110	89.7	24	34.6	9	50.9	14	4.2	1
Da Nang	68-6882	35	24.7	14	21.7	13	--	--	3.0	1
Da Nang	68-6875*	18	17.2	7	4.7	2	10.3	4	2.2	1
Total		1912	1222.1	500	642.6	288	390.0	136	189.5	76
Grand Total		3630	2450.8	907	1344.5	516	707.9	251	398.4	140

* Multichannel Recording System

Upon the completion of the flights, the field technicians developed and scanned the oscillograms to determine the proper functioning of the recording systems. They then packaged the oscillograms along with the corresponding supplemental data forms for shipment to the Data Processing Center in Dayton, Ohio.

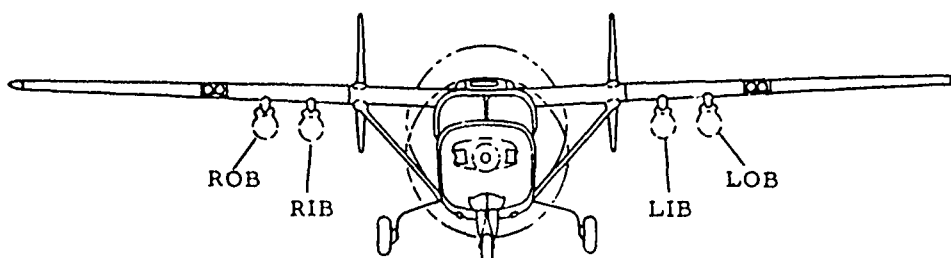
5. DATA DEFINITIONS

5.1 Recorded Parameters

For the final presentation of values for the five recorded data parameters--airspeed, altitude, vertical acceleration, and the pitch and roll angular rates--ranges for each parameter were established at the outset of the program. Table III lists these ranges and indicates by asterisks the thresholds; that is, the ranges within which the data values were judged insignificant for fatigue design and analyses purposes. The extraction of data from the oscillogram traces of the five recorded data parameters was based primarily on peak readings of the vertical acceleration and the two angular rates.

TECHNOLOGY INCORPORATED
SUPPLEMENTAL DATA

Aircraft Type _____ Aircraft Ser. No. _____ Date of Flight _____
 Mission Type: ☐ Combat ☐ Other Airframe Time (TO) _____
 Equipment Ser. No.'s: Recorder _____ Airspeed _____ Altitude _____
 Accel. _____ Stores Monitor _____ Roll _____ Pitch _____
 Takeoff: Time _____ Base _____ Baro Pressure (uncor) _____
 Landing: Time _____ Base _____ Baro Pressure (uncor) _____



Aircraft Operating Weight:
(Includes pilot, oil, pylons, etc.)
(Does not include fuel wt. & stores)

TAKEOFF

LANDING

_____ lb.

_____ lb.

Fuel Weight

_____ lb.

_____ lb.

External Stores:

ROB Store Type _____ Wt. _____ lb.

_____ lb.

RIB Store Type _____ Wt. _____ lb.

_____ lb.

LOB Store Type _____ Wt. _____ lb.

_____ lb.

LIB Store Type _____ Wt. _____ lb.

_____ lb.

Total External Store Weight _____ lb.

_____ lb.

Total Weight _____ lb.

_____ lb.

Store Releases: In Sequence (If more than four releases are made list on reverse side)

1. Time after T.O. _____	Type Pass _____	Store Released _____
2. Time after T.O. _____	Type Pass _____	Store Released _____
3. Time after T.O. _____	Type Pass _____	Store Released _____
4. Time after T.O. _____	Type Pass _____	Store Released _____

Note any System Changes or Adjustments on reverse side.

Date _____

Technician _____

Figure 4. Supplemental Data Form

TABLE III

Recorded Parameter Ranges

Airspeed (kn)	Altitude (ft x 10 ³)	n _z (g)	Pitch Rate (°/sec)	Roll Rate (°/sec)
0 to 60	0 to 1	< 1.25	< -25	< -70
60 to 90	1 to 2	-1.25 to -0.75	-25 to -20	-70 to -60
90 to 120	2 to 5	-0.75 to -0.25	-20 to -15	-60 to -50
120 to 150	5 to 10	-0.25 to 0.25	-15 to -10	-50 to -40
> 150	10 to 15	0.25 to 0.80	-10 to -5	-40 to -30
	> 15	0.80 to 1.20*	-5 to 5*	-30 to -25
		1.20 to 1.60	5 to 10	-25 to -20
		1.60 to 2.00	10 to 15	-20 to -15
		2.00 to 2.50	15 to 20	-15 to 15*
		2.50 to 3.00	20 to 25	15 to 20
		3.00 to 3.50	> 25	20 to 25
		3.50 to 4.00		25 to 30
		> 4.00		30 to 40
				40 to 50
				50 to 60
				60 to 70
				> 70

* threshold

The center-of-gravity normal acceleration data were processed according to primary and secondary peaks. A primary peak was defined as the maximum value, either positive or negative about the 1g mean, which exceeded threshold (0.8g to 1.2g) between crossings of the 1g line. A secondary peak was defined as a peak which equaled or exceeded a rise and fall of 50 percent of the primary peak or a change of 0.2g, whichever was greater.

Only primary roll rate and pitch rate peaks were read. All roll rate values between -15 and +15 degrees per second and all pitch rate values between -5 and +5 degrees per second were in the threshold range.

For the sake of completeness and accuracy, parameter readings were taken just inside threshold. However, these readings were later deleted during computer processing and were not presented.

For each peak reading, corresponding, or coincident, values of the other four data traces were read. Also, the airspeed and altitude traces were read at sufficient intervals to permit reproducing a time history for each of these two parameters.

Acceleration peaks were identified as being either maneuver or gust induced and grouped accordingly for separate treatment in the data processing and presentation. The criteria for identification as a gust peak were a rough airspeed trace, a rough acceleration trace with sharp and irregular peaks, acceleration peaks with a rapid rise and exponential decay, and a peak duration of less than two seconds. The maneuver peak criteria were noncompliance with the gust criteria, a smooth and long-duration peak

excursion, a corresponding change of altitude or airspeed, and a duration of more than two seconds for the peak.

All weapons passes were identified and the data read at time slices such that dive and climb angles could be computed. In addition, the extreme values of all pertinent parameters were read.

5.2 Supplemental Data Parameters

The supplemental data were grouped into four general categories: air base (Bien Hoa and DaNang), mission type ("Combat" and "Other"), aircraft tail number, and aircraft configuration at takeoff. Table IV lists the twelve aircraft configurations identified for data processing.

5.3 Computed Parameters

Five additional parameters were computed: instantaneous gross weight (W_i), percent design limit load (PDLL), a derived equivalent gust velocity (U_{de}), a second derived gust velocity ($\Delta n_z/\bar{A}$) called the PSD gust velocity, and distance flown. For the final presentation of the five computed parameters, ranges for all but distance were established at the outset of the program. Table V lists these ranges and indicates the thresholds where applicable.

The aircraft gross weight during flight was based on the takeoff weight, weight loss due to takeoff fuel, a constant fuel consumption rate for flight, and the weight of stores dropped as indicated by the store release monitor. The data sheet takeoff weights were checked against the basic airplane and equipment weights. These weights are listed in Table IV. The fuel consumption rate was based on the data sheet fuel usage and the recorded flight time. Since the fuel usage prior to takeoff roll was determined to have an insignificant effect on the usage rate, no allowance was made for fuel used during taxi.

The derived equivalent gust velocity, U_{de} , was calculated by using the following equations which were based on those given by Pratt and Walker (Reference 3):

$$U_{de} = \frac{1.1850W(\Delta n_z)}{S C_{L\alpha} \rho_0 V_e K_g}$$

$$K_g = \frac{0.88\mu_g}{5.3 + \mu_g}$$

$$\mu_g = \frac{2(W/S)}{C_{L\alpha} g \bar{c} \rho}$$

TABLE IV
Takeoff Aircraft Configurations

<u>Config. Code</u>	<u>Right Outboard</u>	<u>Right Inboard</u>	<u>Left Inboard</u>	<u>Left Outboard</u>	<u>No.Flts with T.O.Config.</u>
1	clean	clean	clean	clean	72
or	clean	rockets	rockets	clean	
2	LAU-59 with 6 to 7 rkts.	clean	clean	LAU-59 with 6 to 7 rkts.	411
3	LAU-59 with 3 to 5 rkts.	clean	clean	LAU-59 with 3 to 5 rkts.	17
4	LAU-59 with 1 to 2 rkts.	clean	clean	LAU-59 with 1 to 2 rkts.	2
5	LAU-59 with no rkts.	clean	clean	LAU-59 with no rkts.	0
6	B37 K-1 with 3 to 4 flares	1 flare	1 flare	B37 K-1 with 3 to 4 flares	108
7	B37 K-1 with 1 to 2 flares	1 flare	1 flare	B37 K-1 with 1 to 2 flares	0
8	B37 K-1	clean	clean	B37 K-1	0
9	B37 K-1 with 3 to 4 flares	1 flare	1 flare	LAU-59 with 6 to 7 rkts.	156
10	B37 K-1 with 1 to 2 flares	1 flare	1 flare	LAU-59 with 3 to 5 rkts.	1
11	B37 K-1	clean	clean	LAU-59 with 1 to 2 rkts.	0
12	B37 K-1	clean	clean	LAU-59	0
Total					767

Basic Airplane and Equipment Weights

<u>Item</u>	<u>Weight(lb)</u>
Basic airplane (Da Nang)	3225
Basic airplane (Bien Hoa)	3181
Oil	38
Pilot	200
Recording system	20
Fuel (122 gal @ 6 lb/gal.), normal	732
LAU 59/A launcher	54
2.75-in. FFAR rockets	18
AF/B37 K-1 flare rack	80
MK-24 flare	27

where U_{de} = derived equivalent gust velocity, ft/sec
 W = gross weight, lb.
 Δn_z = incremental gust load factor ($\Delta n_z = n_z - 1.0$), g
 ρ_0 = sea-level density, slug/ft³
 ρ = aircraft-altitude density, slug/ft³
 S = wing area, ft²
 C_{L_α} = lift curve slope, per radian
 V_e = equivalent airspeed, knots
 K_g = gust factor, dimensionless
 μ_g = aircraft mass ratio
 \bar{c} = mean aerodynamic chord, ft.

TABLE V
 Calculated Parameter Ranges

Gross Weight (lb x 10)	PDLL	U_{de} & $\Delta n_z / \bar{A}$
< 350	-30 to -15	< -40
350 to 375	-15 to 0	-40 to -35
375 to 400	0 to 15	-35 to -30
400 to 425	15 to 30	-30 to -25
425 to 450	30 to 45	-25 to -20
450 to 475	45 to 60	-20 to -15
475 to 500	60 to 75	-15 to -10
500 to 525	75 to 90	-10 to - 5
> 525	90 to 105	- 5 to 5*
	105 to 120	5 to 10
	> 120	10 to 15
		15 to 20
		20 to 25
		25 to 30
		30 to 35
		35 to 40
		> 40

*threshold

The PSD gust velocity, $\Delta n_z/\bar{A}$, was calculated by using the following equation which is based on that given by Hoblit et al. (Reference 4):

$$\frac{\Delta n_z}{\bar{A}} = \frac{1.1850W(\Delta n_z)}{S C_{L_\alpha} \rho V_T K_\sigma}$$

where V_T = true airspeed, knots

K_α = gust response factor, dimensionless

$\bar{A} = (S C_{L_\alpha} \rho V_T K_\sigma) / 1.185 W$ for one-degree-of-freedom analysis

$\bar{A} = \sigma_{\Delta n} / \sigma_w$ for multi-degree-of-freedom analysis

where $\sigma_{\Delta n}$ = root-mean-square normal acceleration

σ_w = root-mean-square gust velocity

and

the remaining factors are the same as the corresponding ones given for the U_{de} equation.

The gust response factor K_σ is a function of μ_g and \bar{c}/L , where L is the scale of turbulence. K_σ was based on a plot given in Reference 4. The turbulence scale was treated as a function of altitude to obtain L values of 500, 1750, and 2500 feet for the altitude ranges of 0 to 1000 feet, 1000 to 2500 feet, and 2500 feet and above, respectively.

In this study, the foregoing equations for U_{de} and $\Delta n_z/\bar{A}$ were both based on a one-degree-of-freedom analysis. As apparent, their right-hand members differ only in the last three factors in the denominator: ρ_0 (aircraft-altitude density) versus ρ (sea-level density), V_e (equivalent airspeed) versus V_T (true airspeed), and K_g (gust factor) versus K_σ (gust response factor). All other quantities being equal, the product of ρ and V_T will yield derived gust velocities no more than 10 percent greater than the product of ρ_0 and V_e at altitudes between 0 and 5000 feet. However, the derived gust velocity differences resulting from K_g and K_σ will be more significant.

As defined in Reference 3, K_g is the maximum value of the ratio $\Delta n/\Delta n_s$ for each value of μ_g , where Δn is the center-of-gravity acceleration imposed on an aircraft free only to plunge when penetrating a single discrete gust represented by a one-minus-cosine shape, and Δn_s is a reference acceleration that would result from a lift force equal to the steady-state lift produced by the maximum gust velocity. Solutions of the equations of motion for various values of μ_g produced the foregoing expression for K_g .

As defined in Reference 4, K_G is the gust response factor resulting from an aircraft penetrating a continuous gust field represented by the von Karman isotropic gust spectrum. It is a function not only of the mass ratio μ_g , but also of the scale ratio \bar{C}/L .

The relative magnitudes of the derived gust velocities resulting from K_g and K_G may be studied by using a method given by Press and Steiner (Reference 5). First, the equation for U_{de} may be rewritten as

$$U_{de} = \Delta n_z / \bar{C}$$

where
$$\bar{C} = \frac{\rho_0 V_e C_{L\alpha} S}{1.185 W} K_g$$

Then the ratio of \bar{C}/\bar{A} may be expressed as

$$\frac{\bar{C}}{\bar{A}} = \frac{K_g}{K_G} \left(\frac{\rho_0}{\rho} \right)^{1/2}$$

Now for a typical set of 0-2A conditions such as an airspeed of 105 knots, an altitude of 3500 feet, and a gross weight of 4125 pounds, the ratio \bar{C}/\bar{A} is 2.55. For a larger aircraft at altitudes ranging up to 60,000 feet, Reference 5 gives \bar{C}/\bar{A} values between 1.78 and 3.12, a range which obviously includes the 2.55 example.

Therefore, principally because of the relative magnitudes resulting from K_g and K_G , it may be anticipated that the U_{de} values would be generally only about 40 percent of the $\Delta n_z/\bar{A}$ values.

As mentioned above, the given derived gust velocity equations were based on a one-degree-of-freedom analysis. The comparison of the results from such an analysis with those of a multi-degree-of-freedom analysis would therefore be significant. Since the spectral method of calculating gust velocity depends highly on the aircraft transfer function which includes only aircraft plunging in one degree of freedom, the one-degree-of-freedom analysis may not yield a good gust velocity presentation if the flexibility of an aircraft structure, such as that of the C-130, affects the transfer function. As noted in Reference 6, the one-degree-of-freedom analysis for the C-130 airplane yields \bar{A} values lower than the multi(8 to 16)-degree-of-freedom analysis; consequently, the one-degree-of-freedom analysis would yield higher $\Delta n_z/\bar{A}$ values. The U_{de} values from Reference 7 which were based on a one-degree-of-freedom analysis agree more

closely with the Reference 6 $\Delta n_z/\bar{A}$ values derived from the multi-degree-of-freedom analysis than the Reference 6 $\Delta n_z/\bar{A}$ values derived from the one-degree-of-freedom analysis.

The following equation was used to calculate the percent design limit load (PDLL):

$$PDLL = (W \cdot n_z) / (W_d \cdot n_{zd})$$

where W_i = instantaneous gross weight

n_z = actual normal load factor

n_{zd} = design normal load factor

W_d = maximum design gross weight

The dive and climb angles were calculated from the following equation:

$$\text{dive (or climb) angle} = \theta = \sin^{-1} \frac{h_1 - h_2}{(t_1 - t_2)V_t}$$

where h_1 = pressure altitude at the start of the interval

h_2 = pressure altitude at the end of the interval

t_1 = time corresponding to h_1

t_2 = time corresponding to h_2

V_t = average true velocity computed at $(t_1 + t_2)/2$, the midpoint of the interval

θ = measured clockwise (counterclockwise) from the horizontal.

6. DATA PROCESSING

The data processing consisted of four major steps: (1) oscillogram editing to determine data validity and to note the points to be measured; (2) manual reading of the oscillogram trace deflections and automatic punching of the data on cards; (3) quality control review of the measurements to maintain established reading accuracy; and (4) computer processing of the oscillogram measurements and supplemental data. Before and after reading and after computer processing, independent data checks were made manually and by the computer program to detect and correct any errors caused by instrument malfunctions, incorrect measurements, and erroneous supplemental data transcriptions.

In noting the oscillogram traces to be measured, editors marked the airspeed and altitude traces at intervals, ranging from 0.1 to 2.0 minutes, and the computer was used to interpolate the times at which airspeed and altitude changed intervals. In addition, editors marked those acceleration peaks, both gust and maneuver induced, which met the criteria defined in Section 5.1. Both primary and secondary maneuver peaks which met the above criteria were marked. Only primary peaks were considered as gust induced. The editors also marked the weapons passes as defined in Section 5.1.

Acceleration peaks were also matched with troughs to form cycles. A cycle was defined as all peaks included between two positive crossings of the lg line. The computer then matched the maximum positive peak with the lowest trough, the next highest peak with the next lowest trough, etc. Unmated peaks or troughs were matched with the lg line.

On the multichannel data, the roll rate and pitch rate peaks which met the criteria defined in Section 5.1 were marked. Only primary peaks were marked for roll rate and pitch rate.

In addition to marking the data readings, the editors noted the times at which the mission segments changed and when the stores monitor indicated a drop. They also measured and checked the pre-flight calibrations and the zero or static positions of each trace.

Any multichannel data having weapon passes were then marked at the times at which the parameter deflections were to be measured. These instants coincided with the following events: the start and end of the pass, the start and end of the interval used to compute the dive and the climb angles, the midpoint of the dive and the climb angles, and the peak in the acceleration trace with the corresponding roll rate and pitch rate. The editors also obtained the configurations before and after the pass from the supplemental data sheets.

Semiautomatic reading equipment coupled to keypunches were used to measure the trace displacements at the selected points and to punch the measurements onto cards. The airspeed and altitude traces were measured whenever they changed direction. Such changes occurred at intervals ranging from a few seconds to 2 minutes, the longest intervals being during cruise periods. All acceleration peaks were read and coded as gusts or maneuvers. On the multichannel data, the angular roll rate and angular pitch rate were measured at each maneuver acceleration peak and at each roll rate or pitch rate peak. For these latter peak values, the corresponding vertical acceleration was also read. The weapon pass data were digitized at each of the marked times. In addition, the preflight calibrations, the zero or static position of each trace, and the supplemental data were transcribed onto cards.

After the digitized data was listed in a computer printout, the reduction section checked the listing with the established card format and compared the printout information with the oscillograms to insure that the extracted data adequately reflected the trace deflections. Unusual peak values (or corresponding values on the multichannel data) were checked by precise manual measurements of the values on the oscillogram.

Quality control specialists then applied a random sampling technique to the data of each flight. In this process, they compared the readings on the cards with manual measurements of corresponding points on the oscillogram. If the differences exceeded the established quality control tolerances, the entire flight was reprocessed. For all reading differences made in measuring the 2053 hours of total data and 708 hours of multichannel data, the quality control group computed the means and standard deviations for each parameter. Table VI shows the standard deviations and the error limits for 95 and 99.7 percent of the readings. These calculations were based on maximum calibration slopes.

TABLE VI

Quality Control Evaluation of Data Reading Accuracy

<u>Parameter</u>	<u>Deviation</u>	<u>95%(2σ)</u>	<u>99.7%(3σ)</u>
n_z	0.015g	0.030g	0.045g
Roll Rate	0.77°/sec	1.54°/sec	2.31°/sec
Pitch Rate	0.24°/sec	0.48°/sec	0.72°/sec
Altitude (at 2000 ft)	39 ft	78 ft	117 ft
Airspeed (at 100 KEAS)	1.5 KEAS	3.0 KEAS	4.5 KEAS

The mean of the measured differences was approximately zero, which confirmed that the difference distribution had not shifted during the program. After the quality control group found the data from a flight acceptable, it was sent to the ASD computer facility at Wright-Patterson Air Force Base for processing.

After the computer processing, a group not previously involved rechecked the processed data for all types of errors. With the aid of computer-listed comments for values exceeding set limits, this group compared the recorded data values against the O-2A structural design envelope and the performance limits. Thus any data inconsistent with the flight envelope because of instrumentation

malfunction or data reduction mistakes were detected and corrected. This check for errors in the more extreme data and the quality control for monitoring the digitizing ensured the accuracy of the processed data.

Data found acceptable was filed in a data bank, and all other data was reprocessed until made acceptable or discarded as unusable. The tables in this report were compiled from the bank of filed data by a report-generator program.

7. DATA PRESENTATION

Because of their bulk, the following figures and tables are presented in the Appendix.

For the basic VGH data, the histograms in Figures 5 through 10 present the percentages of recorded flight time in altitude, airspeed, and gross weight ranges. With a breakdown by mission type, Figures 5, 6, and 7 present the percentages for the Phase I data from DaNang Air Base, and Figures 8, 9, and 10 do the same for the Phase II data from Bien Hoa Air Base.

For the mean and the lower 90 percent statistical tolerance limit, Figure 11 presents the hours to reach or exceed the given n_z levels. As indicated, at the 90 percent confidence level, 90 percent of the instrumented aircraft would have exceedance values above the lower 90 percent tolerance limit.

Figures 12, 13, and 14 show plots of the derived gust velocity distributions. For each altitude range, Figure 12 presents the nautical miles to reach or exceed U_{de} levels. Also for each altitude range, Figures 13 and 14 present the exceedances per nautical mile for U_{de} and Δn_z levels, respectively. As anticipated in Section 5.3, the $\Delta n_z/A$ spectrum has a greater severity than the U_{de} spectrum.

Figures 15 and 16 present typical mission profiles of selected flights from each base. Although both day and night flights from both bases were recorded, none of the night flights from DaNang performed weapon delivery maneuvers. The data shown in these figures include configuration, altitude, gross weight, and range of n_z values. These profiles represent characteristics observed in many flights. Combat flights from Bien Hoa and DaNang extended up to 5.1 and 4.7 hours, respectively. Of the data presented in this report, only the data for the weapon passes is broken down into daytime and nighttime hours. However, all recorded night flights from Bien Hoa and DaNang accounted for 500 and 250 hours of data, respectively.

The required data tabulations are presented in Tables VII through LVI. The VGH data is given in Tables VII through XXX, and the multichannel data in Tables XXXI through LVI.

Tables VII, VIII, and IX present the VGH flight time distribution in various coincident parameter ranges. These tables form the basis of the data for the mission profile and the flight spectrum. The configuration Nos. 2 and 9 data from Bien Hoa and the configuration Nos. 2 and 6 data from DaNang contain most of the recorded flight time.

Tables X, XI, XII, and XIII present the number of n_z cycles given as the maximum positive peak value versus the associated minimum negative peak value. Over three quarters of these maneuver acceleration cycles have minimums which fall within the threshold.

The maneuver n_z data is presented as the number of peaks occurring in n_z ranges and the coincident ranges of other parameters in Tables XIV through XIX. Tables XX and XXI present the n_z peak data by aircraft tail number. Table XXII presents n_z values equal to or greater than 4.0 along with the corresponding aircraft tail number, base, mission, mission segment, configuration, PDLL, airspeed, altitude, and gross weight.

For the instrumented aircraft, Table XXIII shows the times to reach or exceed values of the normal load factor, n_z , for the mean, or 0.5 probability level, and for the lower 90 percent tolerance, or 0.1 probability level.

Tables XXIV, XXV, and XXVI list the percent design limit load, or PDLL, values computed from the n_z values in PDLL ranges and the coincident ranges of other parameters.

Tables XXVII through XXX present the n_z peaks due to gust. The first two tables, Tables XXVII and XXVIII, give the gust n_z peaks in coincident ranges of airspeed, gross weight, and altitude. In Tables XXIX and XXX these n_z peaks have been normalized by the two methods described in Section 5.3: The discrete gust normalization was used to yield the U_{de} values, and the continuous gust normalization was used to produce the $\Delta n_z/\bar{A}$ values.

Tables XXXI through LIV present the multichannel data. With breakdowns of mission segment, gross weight, altitude, airspeed, and configuration, these tables present the frequency of maneuver n_z peaks in n_z ranges versus coincident ranges of roll and pitch rates and the frequency of both roll and pitch rate peaks in roll and pitch rate ranges versus coincident n_z ranges.

With the same format and column headings, Tables LV and LVI list twenty-two weapon pass parameters for the multichannel data. In Table LV the parameter values are ordered according to the record number and the pass sequence during each flight; and in Table LVI they are arranged according to the pass type and the ascending magnitude of n_z . To facilitate the reading and interpretation of these tables, the twenty-two parameters, each identified by the column number and code, are defined as follows:

Weapon Pass Parameter Definitions

<u>Column No.</u>	<u>Column Code</u>	<u>Parameter Definitions</u>
1	FLT	Flight: A code identifying each recorded flight.
2	A/C	Type Data: A code to identify O-2A pass data.
3	Tail	Aircraft Tail Number: Last three digits of aircraft serial number.
4	TP	Type Pass: A one-digit code representing the type of pass: "1" denotes rocket delivery, and "2" represents flare delivery.
5	SEQ	Drop Sequence: This number indicates the order of the passes in a flight.
6	DN	Day or Night: A "1" code number denotes night and a "2" code number represents day.
7	ENC	Entry Configuration: A code representing the configuration of the external stores on the aircraft as it entered a weapon pass. The configuration codes are listed in Table IV.
8	EXC	Exit Configuration: A code representing the configuration of the external stores on the aircraft as it left a pass (see Table IV).
9	TIME	Time: Time to the nearest tenth of a minute giving the time from takeoff when the peak load factor in a pass occurred.
10	Nz	Max n_z : This load factor value, represented to the nearest tenth of a g, is the maximum load factor encountered during a pass.
11	WGT	Gross Weight at Max n_z : This figure represents the aircraft weight at the time of the peak load factor.
12	$n_z(W)$	$n_z \times$ Gross Weight: The product of n_z and gross weight at the time of the peak load factor.
13	DVE	Delta Velocity: The change in airspeed between entry of the weapon pass and maximum load factor.
14	VE	V_e : The equivalent airspeed corresponding to the peak n_z during a weapon pass is represented to the nearest knot.
15	DALT	Delta Altitude: The change in altitude between entry of the weapon pass and maximum load factor.
16	ALT	Altitude: The pressure altitude corresponding to the peak n_z during a weapon pass to the nearest foot.
17	MACH	Mach Number: The Mach number corresponding to the peak n_z during a weapon pass.
18	PCIF	Percent Fuel: Based on the maximum internal fuel capacity, the percent of fuel on board is represented to the nearest percent. The maximum internal fuel capacity was 732 lb.
19	DANG	Dive Angle: The average dive angle in a weapon pass is represented to the nearest degree.
20	CANG	Climb Angle: The average climb angle in a weapon pass is represented to the nearest degree.
21	ROLL	Roll Rate: The roll rate at the time of maximum n_z .
22	PITCH	Pitch Rate: The pitch rate at the time of maximum n_z .

8. CONCLUSIONS

The following conclusions are based on the data presented in this report:

- (1) The combat missions from DaNang and Bien Hoa accounted for 93 and 98.6 percent, respectively, of the recorded flight hours.
- (2) Based on the logged flight time for a 5 percent overlog, the average durations of the flights from DaNang Air Base were 3.2 and 1.5 hours for Combat and Other missions, respectively, and those from Bien Hoa Air Base were 3.4 and 0.6 hours for Combat and Other missions, respectively.
- (3) The typical mission profiles indicate that the Bien Hoa and DaNang flights had similar airspeeds and gross weights but that the DaNang flights had higher altitudes in both day and night missions.
- (4) Although the night flights from both bases were generally longer than the day flights, the night flights from DaNang and those from Bien Hoa accounted for only 24 and 49 percent, respectively, of the recorded data hours.
- (5) On the basis of the recorded data and a 90 percent confidence level, the instrumented aircraft would have a 0.5 probability of exceeding the maneuver load factor of 4.0 every 300 hours and a 0.1 probability of exceeding it every 55 hours.
- (6) Of the 428 rocket passes recorded, 272 had acceleration peaks between 2.0g and 3.0g, and only 27 had peaks over 3.5g.
- (7) As anticipated principally because of the discrete gust representation used to compute U_{de} and the continuous gust spectrum representation used to compute $\Delta n_z/\bar{A}$, the resultant $\Delta n_z/\bar{A}$ values are higher than the U_{de} values.

APPENDIX

G-2A DATA

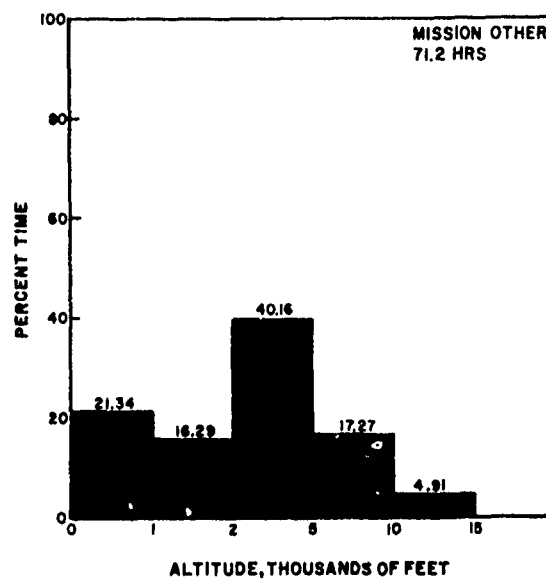
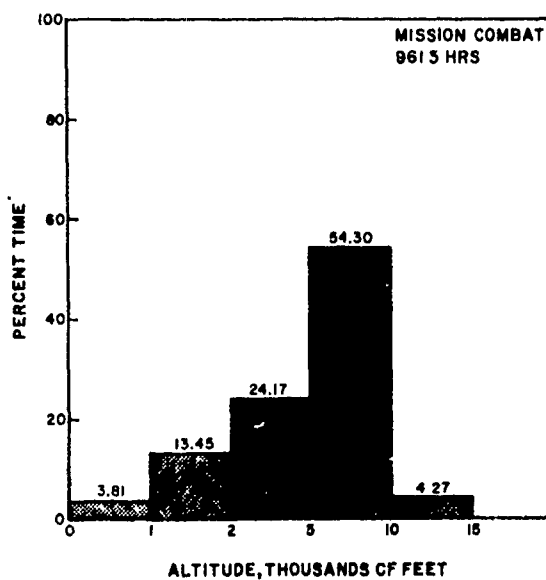


Figure 5. Percentage of Flight Time in Altitude Ranges for Phase I Data from DaNang Air Base

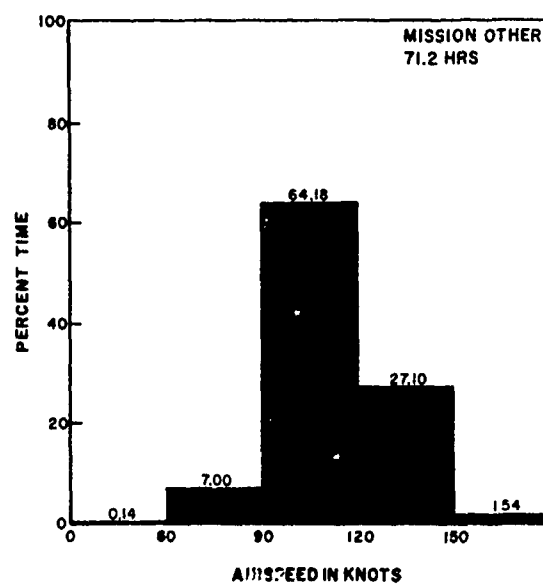
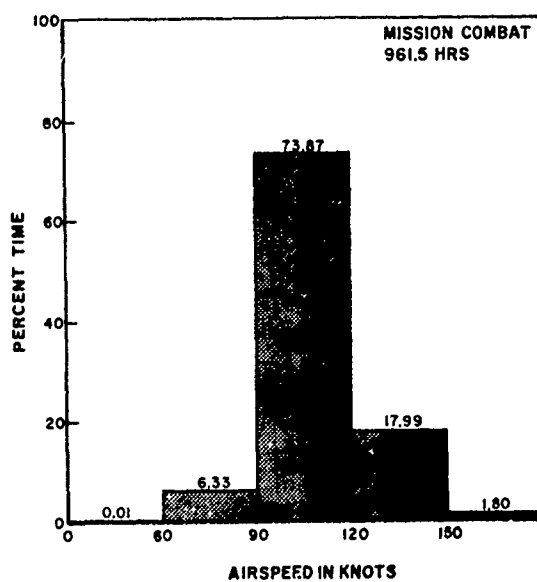


Figure 6. Percentage of Flight Time in Airspeed Ranges for Phase I Data from DaNang Air Base

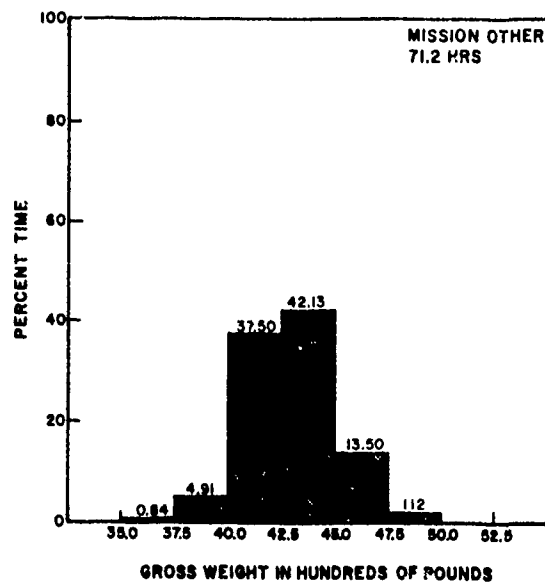
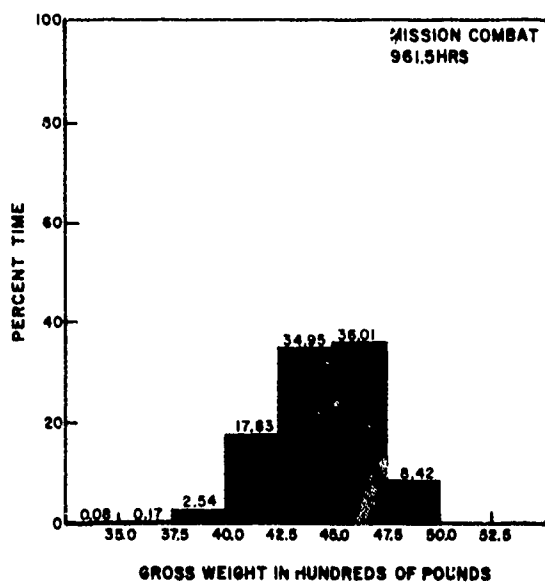


Figure 7. Percentage of Flight Time in Gross Weight Ranges for Phase I Data from DaNang Air Base

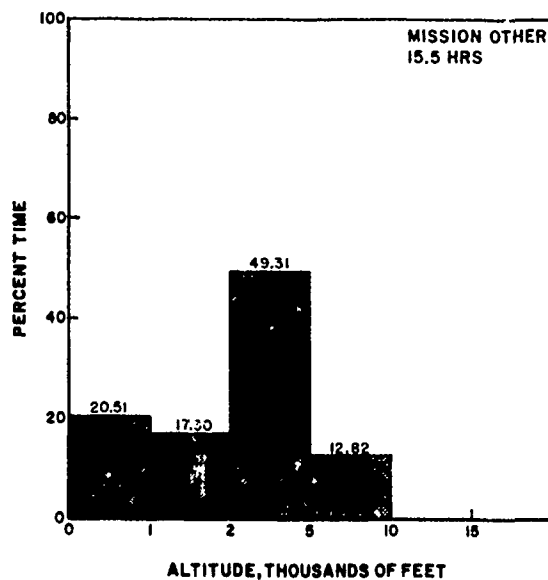
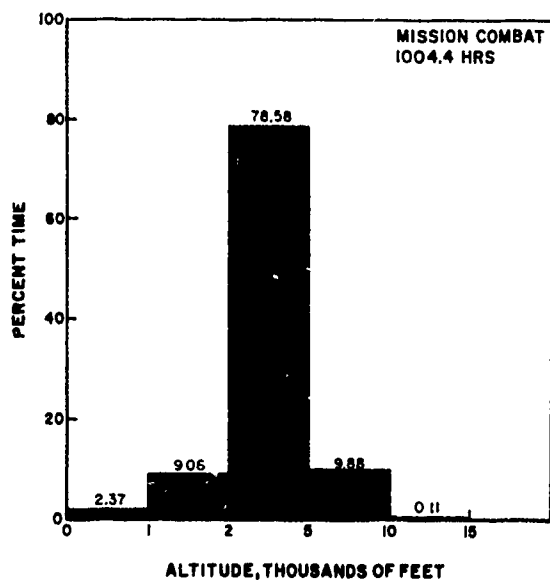


Figure 8. Percentage of Flight Time in Altitude Ranges for Phase II Data from Bien Hoa Air Base

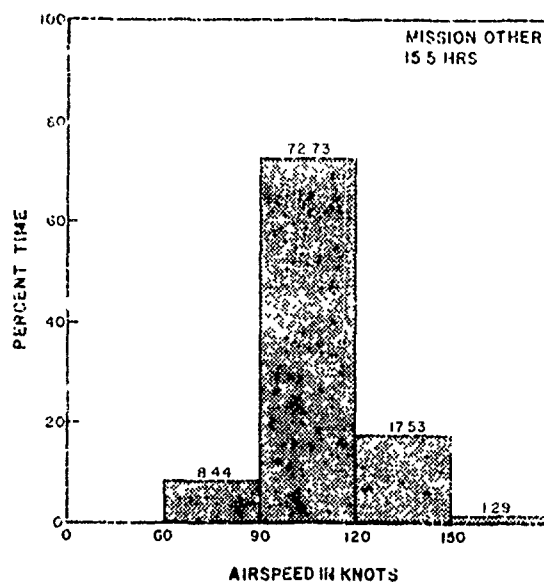
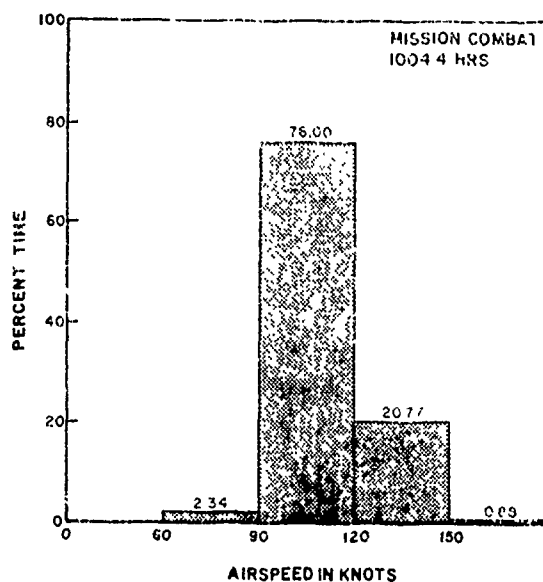


Figure 9. Percentage of Flight Time in Airspeed Ranges for Phase II Data from Bien Hoa Air Base

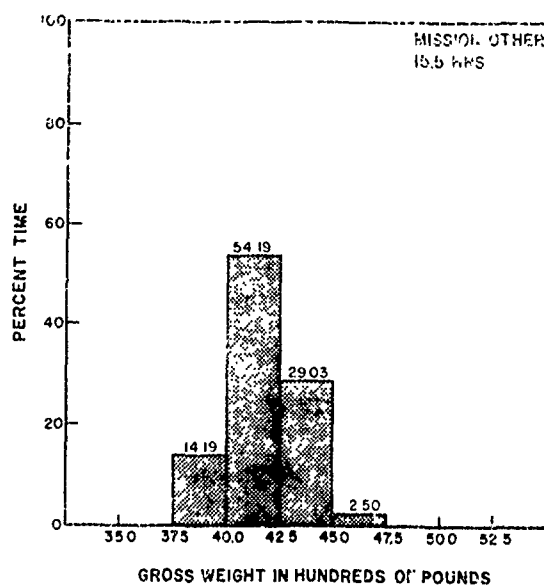
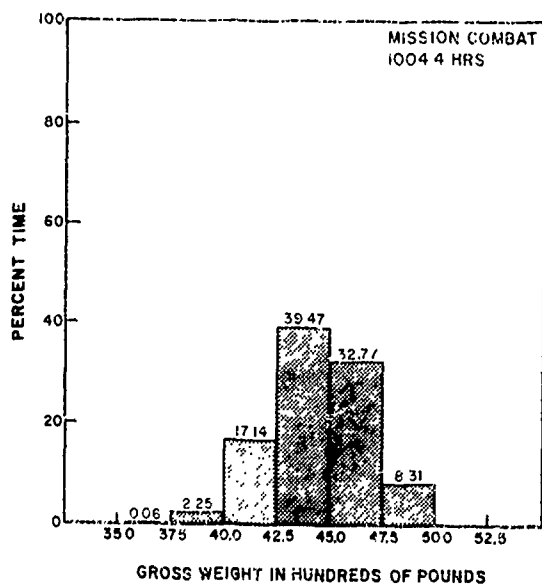


Figure 10. Percentage of Flight Time in Gross Weight Ranges for Phase II Data from Bien Hoa Air Base

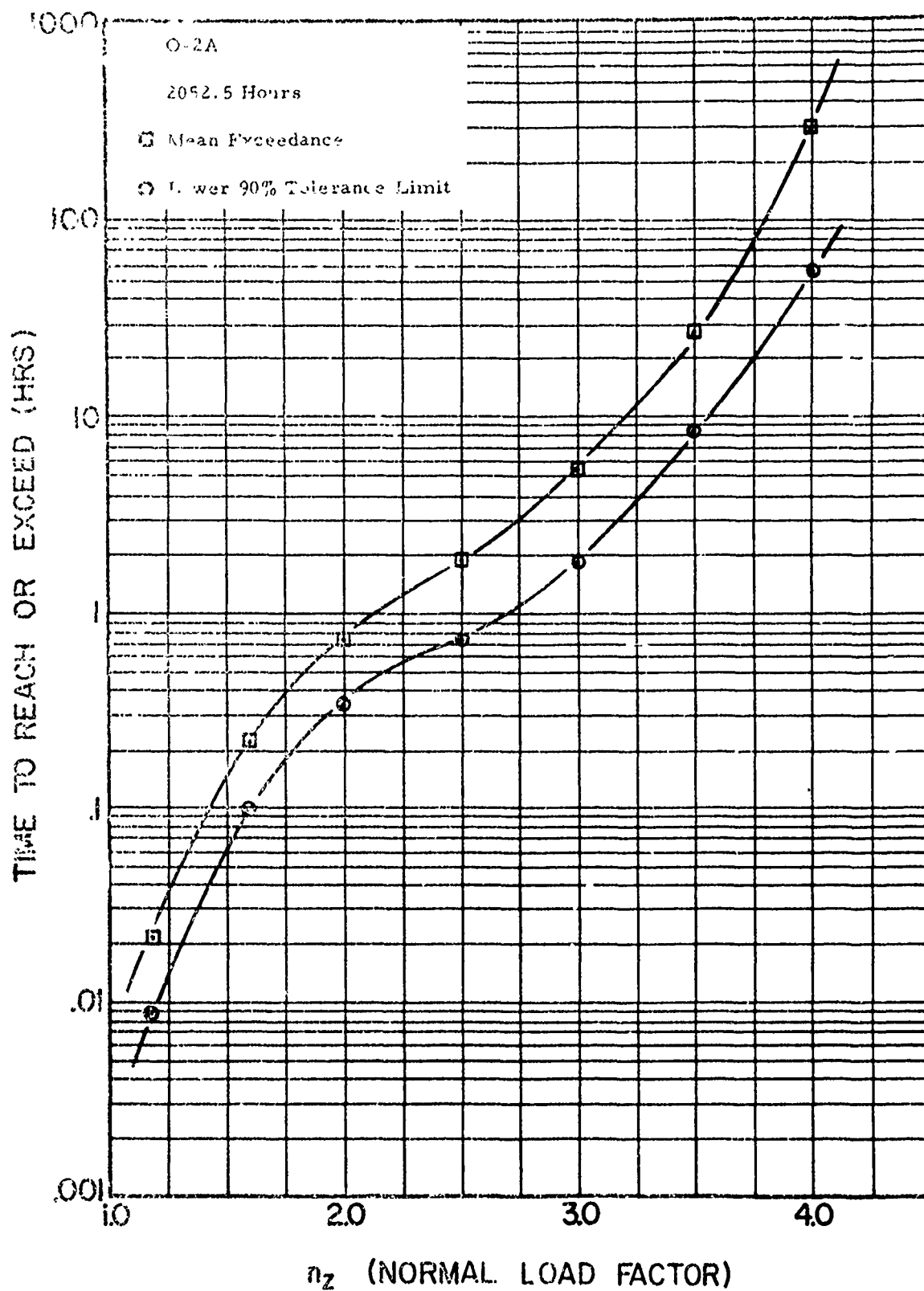


Figure 11. Hours to Reach or Exceed Maneuver n_z Levels for the Mean and the 90% Tolerance Limit

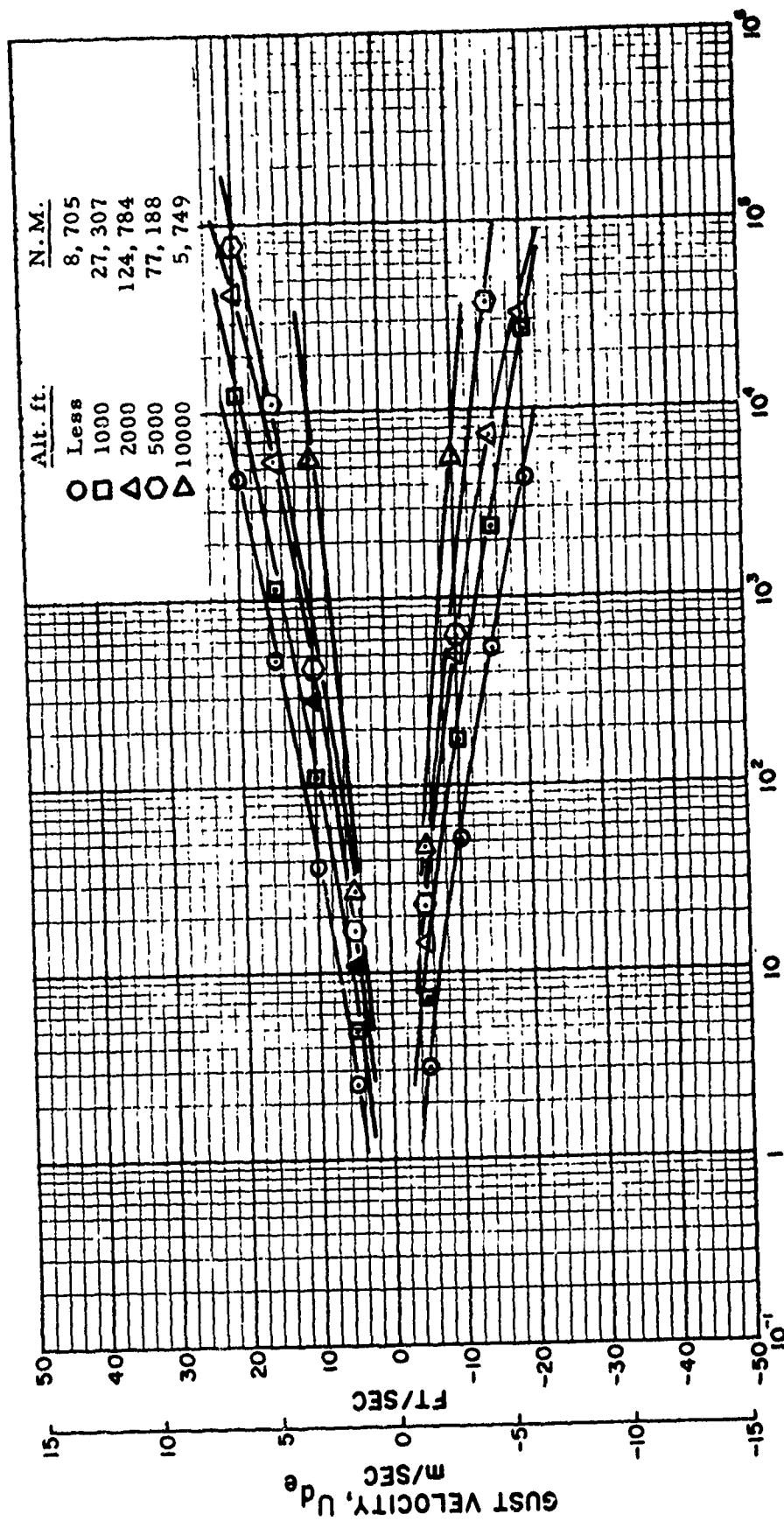


Figure 12. Nautical Miles to Reach or Exceed Derived Equivalent Gust Velocity, U_{de} , by Altitude

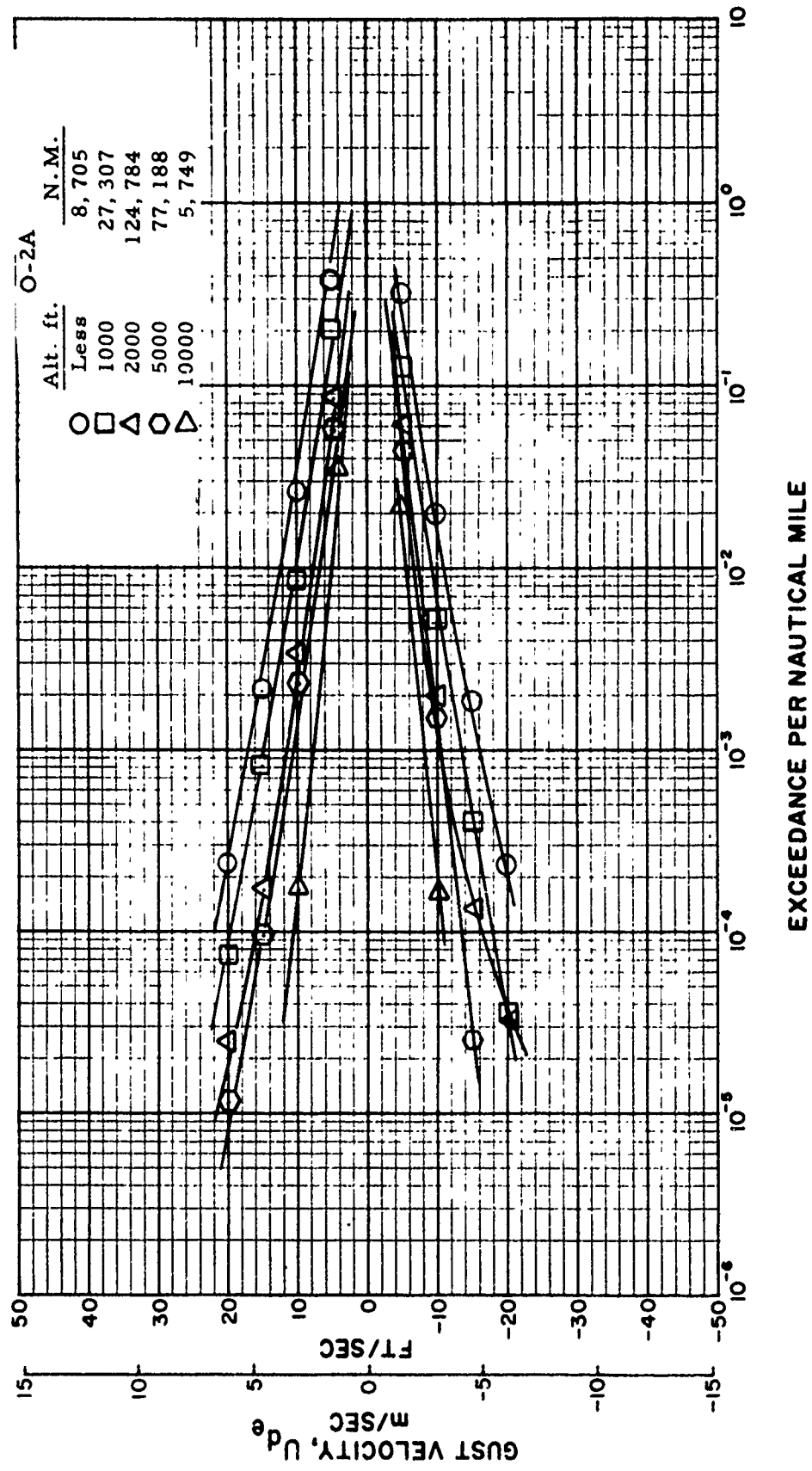


Figure 13. Exceedances per Nautical Mile for Derived Equivalent Gust Velocity, U_{de} , by Altitude

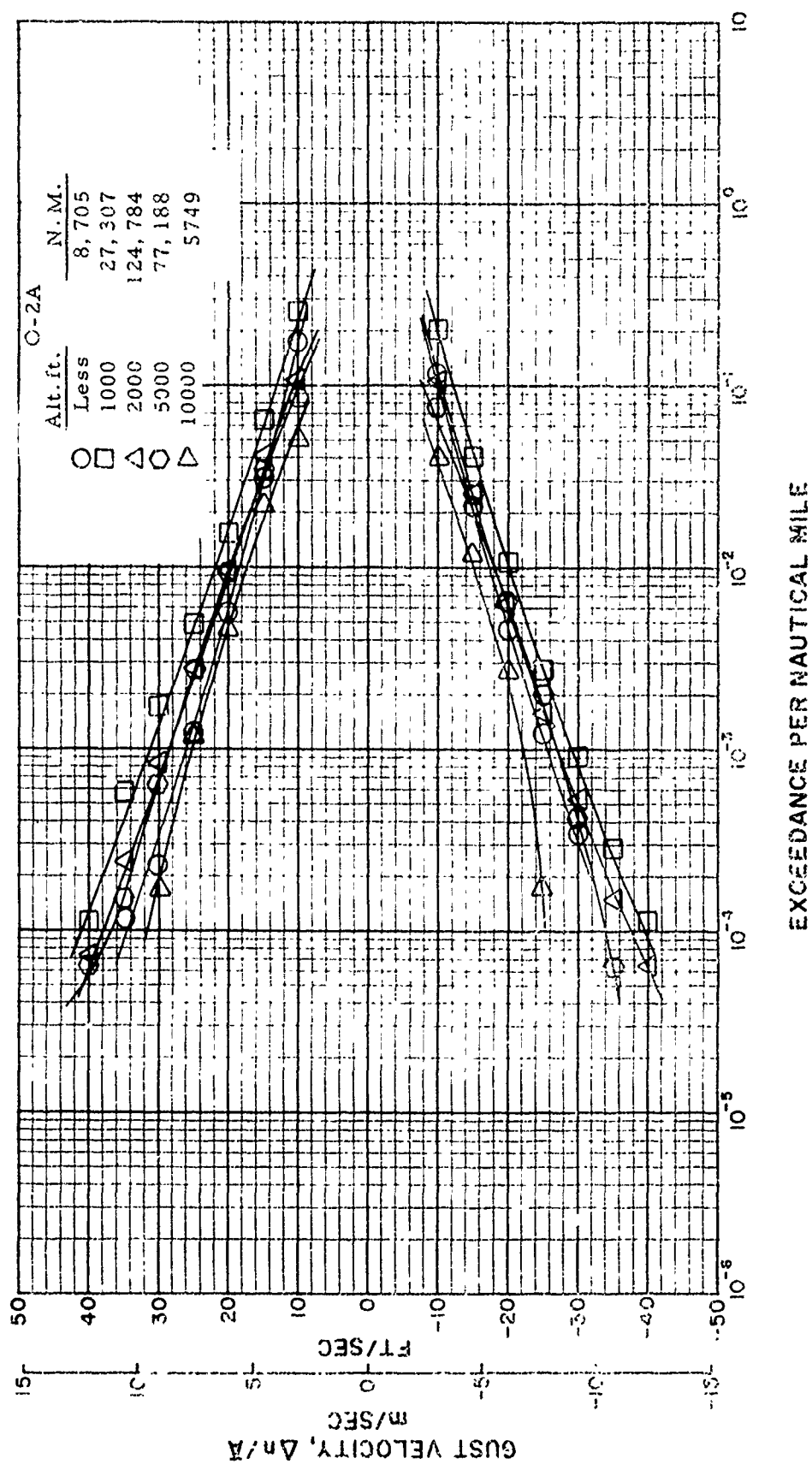


Figure 14. Exceedances per Nautical Mile for Derived Gust Velocity, $\Delta n_2/\bar{A}$, by Altitude

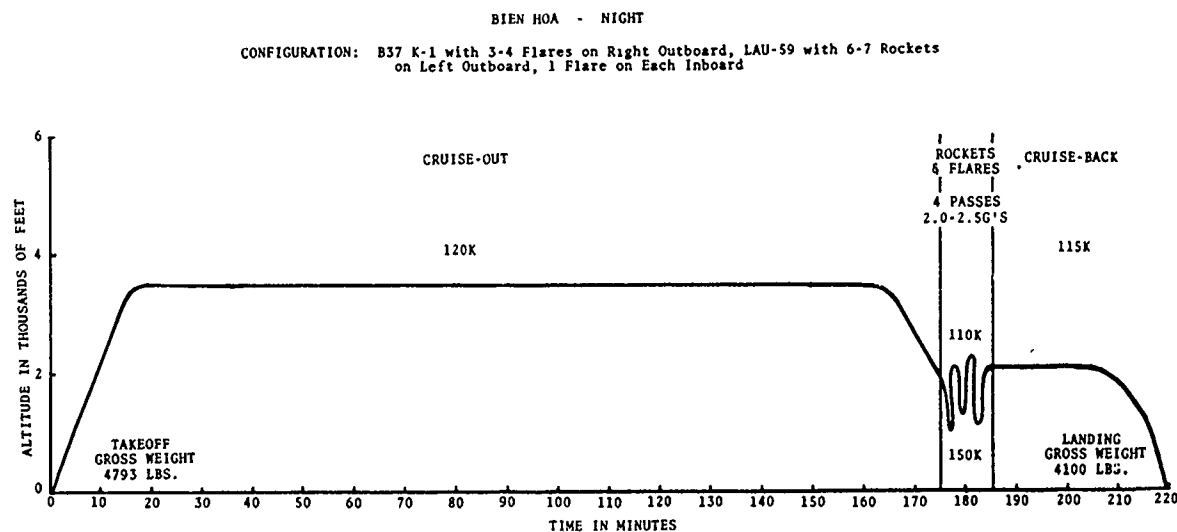
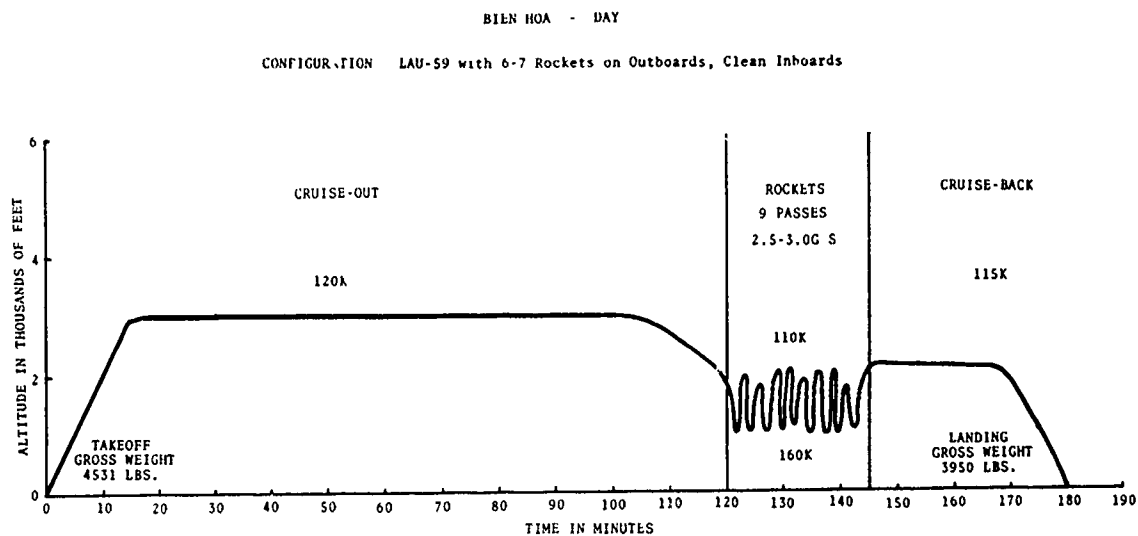


Figure 15. Typical Mission Profiles of Flights from Bien Hoa Air Base.

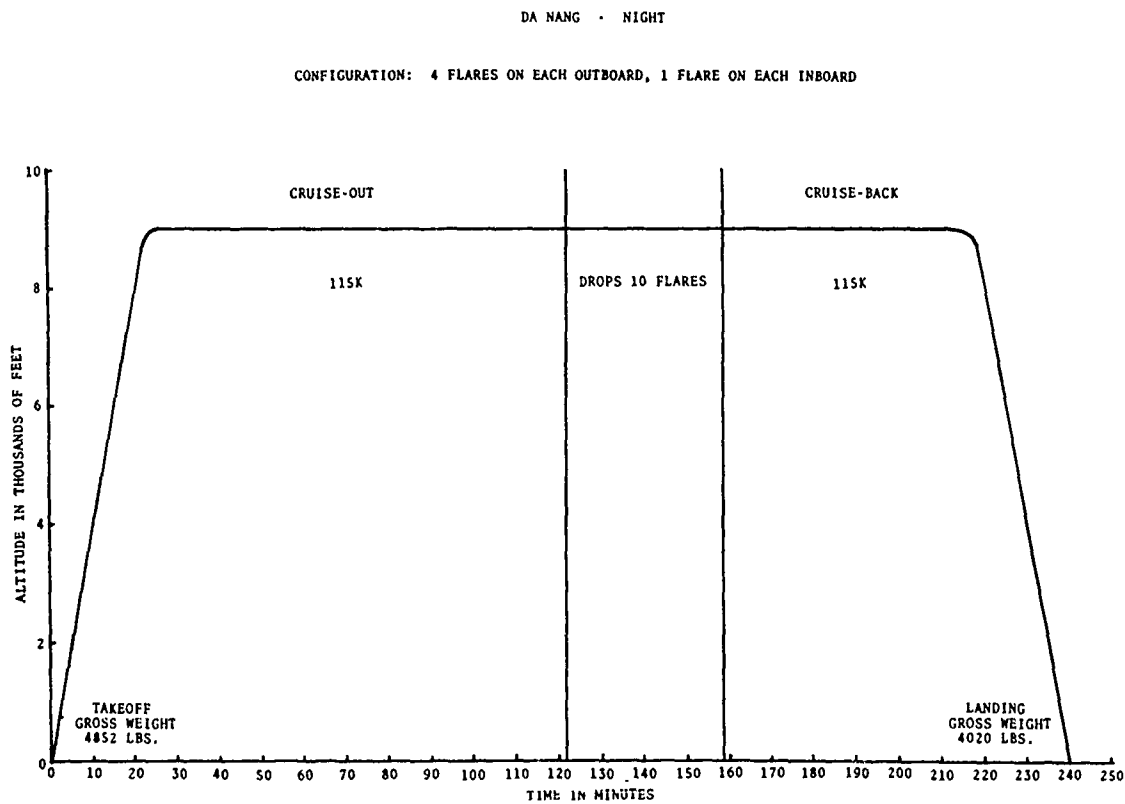
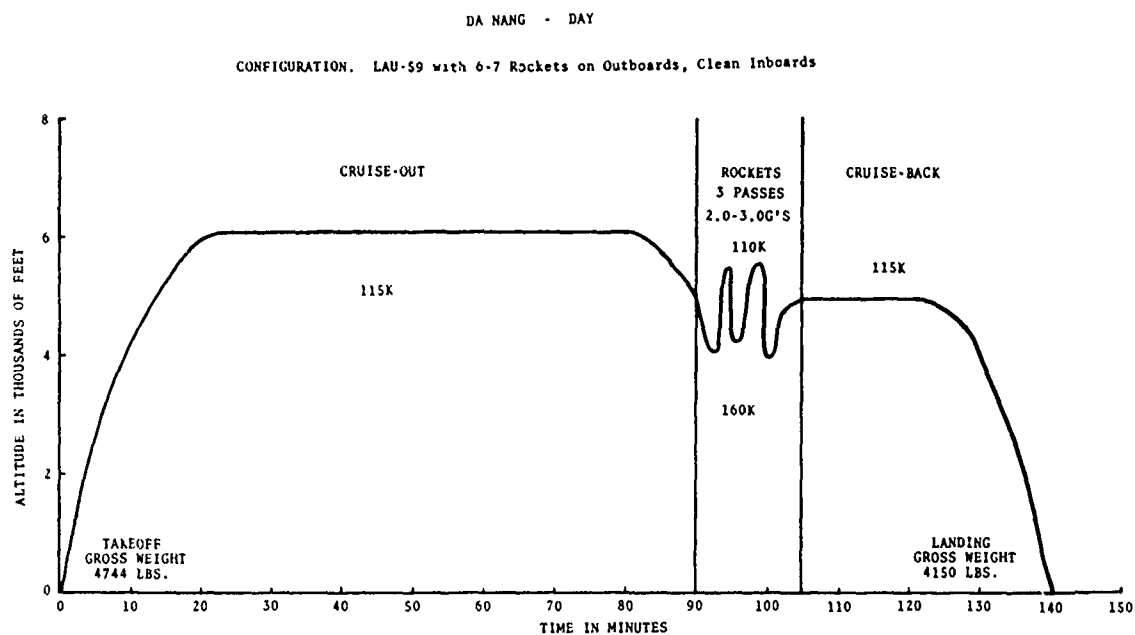


Figure 16. Typical Mission Profiles of Flights from DaNang Air Base.

TABLE VII

Flight Time in Coincident Altitude and Airspeed Ranges
by Mission Type and Base

FLT TIME FOR VELOCITY VS ALTITUDE BY MIS COMBAT BASE DANANG						FLT TIME FOR VELOCITY VS ALTITUDE BY MIS OTHER BASE DANANG					
LESS	60	90	120	150	SUM	LESS	60	90	120	150	SUM
LESS	0.0	3.2	19.0	11.4	3.1	LESS	0.0	2.4	11.7	1.0	0.1
1000	0.0	9.9	86.2	28.1	5.0	1000	0.0	0.3	6.9	4.2	0.3
2000	0.0	9.9	150.7	64.9	6.9	2000	0.0	1.6	15.2	11.3	0.6
5000	0.0	35.9	418.7	65.3	2.2	5000	0.0	0.7	8.8	2.6	0.1
10000		2.1	35.7	3.3	0.0	10000		0.0	3.2	0.2	
15000						15000					
SUM	0.1	60.9	710.3	173.0	17.3	SUM	0.1	5.0	45.7	19.3	1.1

FLT TIME FOR VELOCITY VS ALTITUDE BY MIS COMBAT BASE BENHUA						FLT TIME FOR VELOCITY VS ALTITUDE BY MIS OTHER BASE BENHUA					
LESS	60	90	120	150	SUM	LESS	60	90	120	150	SUM
0.0	3.1	16.9	3.6	0.2	23.8	0.0	0.7	2.3	0.2	0.0	3.2
1000	0.0	1.8	58.0	2.0	91.1	1000	0.2	1.7	0.8	0.0	2.7
2000	0.0	16.9	615.2	6.1	789.0	2000	0.0	0.3	5.6	1.6	7.7
5000	0.0	1.4	72.6	0.5	99.3	5000	0.0	0.7	1.6	0.2	2.0
10000		0.4	0.7		1.1	10000					
15000						15000					
SUM	0.0	23.6	763.4	8.8	1004.4	SUM	0.0	1.3	11.2	2.7	15.5

FLT TIME FOR VELOCITY VS ALTITUDE BY MIS COMBAT						
	LESS	60	90	120	150	SUM
LESS	0.0	6.3	35.9	14.9	3.3	60.4
1000	0.0	11.6	144.2	57.5	7.0	220.4
2000	0.1	26.8	765.9	215.7	13.0	1021.4
5000	0.0	37.3	491.3	90.2	2.7	621.5
10000		2.4	36.4	3.4	0.0	42.2
15000						
SUM	0.1	64.4	1473.7	381.6	26.0	1965.9

FLT TIME FOR VELOCITY VS ALTITUDE BY MIS OTHER						
	LESS	60	90	120	150	SUM
LESS	0.0	3.0	14.0	1.2	0.1	18.4
1000		0.5	8.6	5.0	0.4	14.3
2000	0.0	1.9	20.8	12.9	0.7	36.3
5000	0.0	0.9	10.4	2.7	0.2	14.2
10000		0.0	3.2	0.2		3.5
15000						
SUM	0.1	6.3	57.0	22.1	1.3	86.7

TABLE VIII

Flight Time in Coincident Gross Weight Ranges and
Mission Segments by Mission Type and Base

FLT TIME FOR MIS-SEG VS WEIGHT BY MISSION COMBAT BASE DANANG						FLT TIME FOR MIS-SEG VS WEIGHT BY MISSION OTHER BASE DANANG					
LESS	ASCENT	CRUISE	MANUVR	DESCNT	SUM	LESS	ASCENT	CRUISE	MANUVR	DESCNT	SUM
3500	0.3	0.5	0.6	0.3	0.8	3500		0.2	0.1	0.2	0.6
3750	0.0	2.8	13.4	7.4	23.6	3750		0.2	2.6	0.7	3.5
4000	2.7	59.2	84.3	25.6	171.8	4000	4.7	7.6	8.6	5.8	26.7
4250	8.5	113.0	198.1	16.8	336.4	4250	7.0	5.6	10.1	7.3	30.0
4500	38.8	177.8	123.3	6.4	346.2	4500	2.3	4.1	2.8	0.4	9.6
4750	47.4	30.0	3.2	0.4	81.0	4750	0.5	0.3			0.8
5000						5000					
5250						5250					
SUM	97.7	383.2	423.4	57.1	961.5	SUM	14.5	18.0	24.3	14.4	71.2

FLT TIME FOR MIS-SEG VS WEIGHT BY MISSION COMBAT BASE BENHUA						FLT TIME FOR MIS-SEG VS WEIGHT BY MISSION OTHER BASE BENHUA					
LESS	ASCENT	CRUISE	MANUVR	DESCNT	SUM	LESS	ASCENT	CRUISE	MANUVR	DESCNT	SUM
3500		0.1	0.2	0.4	0.6	3500					
3750	0.4	4.3	13.9	4.0	22.6	3750	0.5		0.8	0.9	2.2
4000	2.7	58.0	90.1	21.5	172.2	4000	2.1	0.5	4.1	1.7	8.4
4250	3.8	150.8	233.0	9.0	396.5	4250	1.1	1.1	1.5	0.8	4.5
4500	19.7	230.2	74.7	4.4	329.0	4500	0.2	0.1	0.0	0.1	0.4
4750	28.9	50.2	3.4	0.9	83.3	4750					
5000						5000					
5250						5250					
SUM	55.5	493.5	415.3	40.1	1004.4	SUM	3.9	1.7	6.4	3.5	15.5

TABLE IX

Flight Time in Coincident Aircraft Configurations and Mission Segments by Mission Type and Base

FLT TIME FOR MIS-SEG VS CONFIG BY MISSION COMBAT BASE DANANG FLT TIME FOR MIS-SEG VS CONFIG BY MISSION OTHER BASE DANANG

	ASCENT	CRUISE	MANUVR	DESCNT	SUM
1	2.3	7.5	19.1	3.9	32.8
2	50.1	109.5	299.2	23.7	482.5
3	1.2	6.8	35.0	4.3	46.3
4	0.2	3.2	12.2	1.8	17.3
5	0.4	5.1	5.1	3.4	14.0
6	42.6	197.1	35.8	8.9	284.4
7		30.3	12.4	4.2	46.8
8	0.5	20.9	3.7	6.1	31.1
9	0.5	2.9	1.2	0.7	5.2
10			0.6		0.6
11			0.0		0.0
12			0.2	0.1	0.3
SUM	97.7	383.2	423.4	57.1	961.5

	ASCENT	CRUISE	MANUVR	DESCNT	SUM
1	10.4	9.5	16.0	10.5	46.4
2	0.4	0.8	0.4	0.2	1.9
3	2.4	2.7	3.3	0.8	9.1
4		0.6	0.7	0.2	1.6
5	1.0	1.3	3.9	2.5	8.7
6	0.4	2.9		0.2	3.5
7					
8					
9					
10					
11					
12					
SUM	14.5	18.0	24.3	14.4	71.2

FLT TIME FOR MIS-SEG VS CONFIG BY MISSION COMBAT BASE BENHUA FLT TIME FOR MIS-SEG VS CONFIG BY MISSION OTHER BASE BENHUA

	ASCENT	CRUISE	MANUVR	DESCNT	SUM
1	0.2	1.4	0.3	0.2	2.0
2	19.3	74.4	273.8	9.9	377.5
3	0.4	5.1	26.3	2.3	34.0
4		0.4	4.0	0.7	5.0
5	0.2	2.1	3.3	2.1	7.7
6					
7					
8					
9	33.6	391.8	89.5	18.7	533.8
10	0.4	11.0	10.2	1.8	23.4
11	0.6	2.9	3.6	1.0	8.1
12	0.8	4.4	4.2	3.4	12.8
SUM	55.5	493.5	415.3	40.1	1004.4

	ASCENT	CRUISE	MANUVR	DESCNT	SUM
1	3.6	1.5	6.2	3.1	14.3
2	0.4	0.2	0.3	0.3	1.2
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
SUM	3.9	1.7	6.4	3.5	15.5

FLT TIME FOR MIS-SEG VS CONFIG BY MISSION COMBAT

	ASCENT	CRUISE	MANUVR	DESCNT	SUM
1	2.5	8.8	19.4	4.1	34.9
2	69.4	184.0	573.0	33.6	860.1
3	1.6	11.9	60.2	6.6	80.3
4	0.2	3.6	16.1	2.4	22.3
5	0.6	7.2	8.4	5.5	21.7
6	42.6	197.1	35.8	8.9	284.4
7		30.3	12.4	4.2	46.8
8	0.5	20.9	3.7	6.1	31.1
9	34.1	394.7	90.7	19.4	539.0
10	0.4	11.0	10.8	1.8	24.0
11	0.6	2.9	3.6	1.0	8.1
12	0.8	4.4	4.5	3.5	13.1
SUM	153.2	876.7	838.7	97.2	1965.6

FLT TIME FOR MIS-SEG VS CONFIG BY MISSION OTHER

	ASCENT	CRUISE	MANUVR	DESCNT	SUM
1	14.0	11.0	22.1	13.6	60.7
2	0.8	1.0	0.7	0.6	3.1
3	2.4	2.7	3.3	0.8	9.1
4		0.6	0.7	0.2	1.6
5	1.0	1.3	3.9	2.5	8.7
6	0.4	2.9		0.2	3.5
7					
8					
9					
10					
11					
12					
SUM	18.5	19.7	30.7	17.9	86.7

TABLE X

Maximum Positive and Correlated Maximum Negative Maneuver n_z Peaks in Associated n_z Ranges

NZ MANEUVER CYCLES SUM

	LESS	-1.25	-0.75	-0.25	0.25	0.80	SUM
0.80				2	20	6283	6305
1.20				3	44	6620	85352
1.60				3	18	999	6547
2.00					12	421	1644
2.50				1	5	263	747
3.00					2	117	300
3.50				1		36	69
4.00						3	7
SUM			10	101	16742	84118	100971

HOURS 2052.5
MILES 243723

TABLE XI

Maximum Positive and Correlated Maximum Negative Maneuver
 n_z Peaks in Associated n_z Ranges by Mission Type and Segment

NZ MANEUVER CYCLES BY MIS-SEG ASCENT, MIS COMBAT

	LESS	-1.25	-0.75	-0.25	0.25	0.80	SUM
0.80					335		335
1.20				1	412	1704	2117
1.60					11	21	32
2.00					2	3	5
2.50							
3.00					1		1
3.50							
SUM				1	961	1728	2690

HOURS 193.2
 MILES 16487

NZ MANEUVER CYCLES BY MIS-SEG ASCENT, MIS OTHER

	LESS	-1.25	-0.75	-0.25	0.25	0.80	SUM
0.80					122		122
1.20					169	815	984
1.60					17	44	61
2.00					5	2	7
2.50					1		1
3.00							
SUM					314	861	1175

HOURS 18.5
 MILES 1962

NZ MANEUVER CYCLES BY MIS-SEG CRUISE, MIS COMBAT

	LESS	-1.25	-0.75	-0.25	0.25	0.80	SUM
0.80				2	340		342
1.20					285	2379	2664
1.60					12	44	56
2.00					5	8	13
2.50							
SUM				2	642	2431	3075

HOURS 876.7
 MILES 104514

NZ MANEUVER CYCLES BY MIS-SEG CRUISE, MIS OTHER

	LESS	-1.25	-0.75	-0.25	0.25	0.80	SUM
0.80					9		9
1.20					14	87	101
1.60					1		1
2.00							
SUM					24	87	111

HOURS 19.7
 MILES 2493

NZ MANEUVER CYCLES BY MIS-SEG MANUVR, MIS COMBAT

	LESS	-1.25	-0.75	-0.25	0.25	0.80	SUM
0.80				2	13	4077	4092
1.20				1	36	6358	7050
1.60					12	835	847
2.00					10	362	372
2.50				1	4	230	235
3.00					1	108	109
3.50						33	33
4.00						3	3
SUM				4	76	12006	12086

HOURS 838.7
 MILES 100301

NZ MANEUVER CYCLES BY MIS-SEG MANUVR, MIS OTHER

	LESS	-1.25	-0.75	-0.25	0.25	0.80	SUM
0.80				1	269		270
1.20				2	3	381	386
1.60				3	5	50	58
2.00					2	30	32
2.50						26	26
3.00					1	6	7
3.50						3	3
4.00							
SUM				6	12	765	783

HOURS 30.7
 MILES 3691

NZ MANEUVER CYCLES BY MIS-SEG DESCNT, MIS COMBAT

	LESS	-1.25	-0.75	-0.25	0.25	0.80	SUM
0.80				3	781		784
1.20				4	814	4168	4986
1.60					54	233	287
2.00					12	44	56
2.50				1	6	15	22
3.00					1	8	9
3.50							
SUM				8	1668	4468	6144

HOURS 97.2
 MILES 12256

NZ MANEUVER CYCLES BY MIS-SEG DESCNT, MIS OTHER

	LESS	-1.25	-0.75	-0.25	0.25	0.80	SUM
0.80				1	150		151
1.20					187	1598	1785
1.60				1	19	72	92
2.00					5	6	11
2.50						1	1
3.00					1		1
3.50							
SUM				2	362	1677	2041

HOURS 17.9
 MILES 2020

TABLE XII

Maximum Positive and Correlated Maximum Negative Maneuver
 n_z Peaks in Associated n_z Ranges by Altitude and Airspeed Ranges

NZ MANEUVER CYCLES BY VELOCITY LESS, ALT LESS								NZ MANEUVER CYCLES BY VELOCITY 60, ALT 1000							
	LESS	-1.25	-0.75	-0.25	0.25	0.80	SUM		LESS	-1.25	-0.75	-0.25	0.25	0.80	SUM
0.80					3		3	0.80				1	45		46
1.20								1.20					37	496	533
SUM					3		3	1.60					1	3	4
HOURS	0.0							2.00							
MILES	2							SUM				1	83	499	583
								HOURS	12.1						
								MILES	1042						
NZ MANEUVER CYCLES BY VELOCITY 60, ALT LESS								NZ MANEUVER CYCLES BY VELOCITY 90, ALT 1000							
	LESS	-1.25	-0.75	-0.25	0.25	0.80	SUM		LESS	-1.25	-0.75	-0.25	0.25	0.80	SUM
0.80					78		78	0.80				2	753		755
1.20					71	455	526	1.20				3	800	10557	11360
1.60					2	6	8	1.60					56	441	497
2.00								2.00				1	10	30	41
SUM					151	461	612	2.50					1	8	9
HOURS	9.3							3.00							
MILES	790							SUM				6	1620	11036	12662
								HOURS	152.8						
								MILES	16679						
NZ MANEUVER CYCLES BY VELOCITY 90, ALT LESS								NZ MANEUVER CYCLES BY VELOCITY 120, ALT 1000							
	LESS	-1.25	-0.75	-0.25	0.25	0.80	SUM		LESS	-1.25	-0.75	-0.25	0.25	0.80	SUM
0.80					372		372	0.80				1	4	634	639
1.20					436	3527	3963	1.20					3	929	7664
1.60				1	35	138	174	1.60					1	134	842
2.00					3	7	10	2.00					1	57	213
2.50								2.50					1	24	49
SUM				1	846	3672	4519	3.00						4	15
HOURS	49.9							3.50							1
MILES	5170							4.00							1
								SUM				1	10	1782	8784
								HOURS	62.5						10577
								MILES	8402						
NZ MANEUVER CYCLES BY VELOCITY 120, ALT LESS								NZ MANEUVER CYCLES BY VELOCITY 150, ALT 1000							
	LESS	-1.25	-0.75	-0.25	0.25	0.80	SUM		LESS	-1.25	-0.75	-0.25	0.25	0.80	SUM
0.80					137		137	0.80				1	78		79
1.20				1	257	1410	1668	1.20				2	195	940	1137
1.60					29	181	210	1.60				1	38	170	209
2.00				1	13	33	47	2.00					46	139	185
2.50					1	5	6	2.50					52	96	148
3.00					1	5	6	3.00					39	61	100
3.50								3.50					11	11	22
SUM				2	438	1634	2074	4.00					2	2	4
HOURS	16.1							SUM				4	461	1419	1884
MILES	2212							HOURS	7.4						
								MILES	1183						
NZ MANEUVER CYCLES BY VELOCITY 150, ALT LESS								NZ MANEUVER CYCLES BY VELOCITY LESS, ALT 2000							
	LESS	-1.25	-0.75	-0.25	0.25	0.80	SUM		LESS	-1.25	-0.75	-0.25	0.25	0.80	SUM
0.80					26		26	0.80				1	6		7
1.20					60	168	228	1.20							
1.60					8	19	27	1.60							
2.00				1	11	5	17	2.00				1	3	15	25
2.50					10	13	23	2.50							
3.00				1	10	6	17	SUM				1	6		7
3.50					1		1	HOURS	0.1						
4.00						1	1	MILES	6						
SUM				2	126	212	340								
HOURS	3.4														
MILES	531														
NZ MANEUVER CYCLES BY VELOCITY LESS, ALT 1000								NZ MANEUVER CYCLES BY VELOCITY 60, ALT 2000							
	LESS	-1.25	-0.75	-0.25	0.25	0.80	SUM		LESS	-1.25	-0.75	-0.25	0.25	0.80	SUM
0.80					1		1	0.80				1	111		112
1.20								1.20					91	759	851
SUM					1		1	1.60			1	3	6	15	25
HOURS	0.0							2.00							
MILES	1							2.50							
								SUM			1	6	208	774	989
								HOURS	28.7						
								MILES	2552						

TABLE XII (concluded)

Maximum Positive and Correlated Maximum Negative Maneuver
 n_z Peaks in Associated n_z Ranges by Altitude and Airspeed Ranges

NZ MANEUVER CYCLES BY VELOCITY 90, ALT 2000								NZ MANEUVER CYCLES BY VELOCITY 120, ALT 5000							
LESS	-1.25	-0.75	-0.25	0.25	0.80	SUM		LESS	-1.25	-0.75	-0.25	0.25	0.80	SUM	
0.80			4	1618		1622		0.80				233		233	
1.20		2	14	2053	21544	23613		1.20			2	458	4392	4852	
1.60		2	2	167	876	1047		1.60			3	94	593	690	
2.00				18	70	90		2.00				48	106	154	
2.50				2	5	7		2.50				22	19	41	
3.00				1	1	2		3.00				4	5	9	
3.50	1					1		3.50				1		1	
4.00								4.00							
SUM		5	22	3859	22496	26382		SUM			5	860	5115	5980	
HOURS	786.6							HOURS	92.9						
MILES	89009							MILES	13142						
NZ MANEUVER CYCLES BY VELOCITY 120, ALT 2000								NZ MANEUVER CYCLES BY VELOCITY 150, ALT 5000							
LESS	-1.25	-0.75	-0.25	0.25	0.80	SUM		LESS	-1.25	-0.75	-0.25	0.25	0.80	SUM	
0.80			3	1312		1315		0.80				24		24	
1.20			14	2015	19462	17491		1.20				54	230	293	
1.60			2	259	1468	1729		1.60			1	21	85	107	
2.00				102	334	439		2.00				25	45	70	
2.50				34	81	115		2.50			1	45	50	96	
3.00				4	11	15		3.00			1	14	15	30	
3.50				1	2	3		3.50				4	2	6	
4.00								4.00							
SUM			22	3727	17358	21107		SUM			3	187	436	626	
HOURS	228.6							HOURS	2.9						
MILES	30923							MILES	510						
NZ MANEUVER CYCLES BY VELOCITY 150, ALT 2000								NZ MANEUVER CYCLES BY VELOCITY 60, ALT 10000							
LESS	-1.25	-0.75	-0.25	0.25	0.80	SUM		LESS	-1.25	-0.75	-0.25	0.25	0.80	SUM	
0.80			1	140		141		0.80				4		4	
1.20			3	318	1444	1765		1.20					3	3	
1.60			3	83	331	417		1.60							
2.00			2	83	203	288		SUM				4	3	7	
2.50		1	3	72	150	226									
3.00				40	62	102									
3.50				18	16	34									
4.00				1	1	2									
SUM		1	12	755	2207	2975									
HOURS	13.7														
MILES	2295														
NZ MANEUVER CYCLES BY VELOCITY LESS, ALT 5000								NZ MANEUVER CYCLES BY VELOCITY 90, ALT 10000							
LESS	-1.25	-0.75	-0.25	0.25	0.80	SUM		LESS	-1.25	-0.75	-0.25	0.25	0.80	SUM	
0.80				2		2		0.80				36		36	
1.20								1.20			1	25	232	258	
SUM						2		1.60				2	7	9	
HOURS	0.0							2.00				1	1	2	
MILES	2							SUM			1	64	240	305	
NZ MANEUVER CYCLES BY VELOCITY 60, ALT 5000								NZ MANEUVER CYCLES BY VELOCITY 120, ALT 10000							
LESS	-1.25	-0.75	-0.25	0.25	0.80	SUM		LESS	-1.25	-0.75	-0.25	0.25	0.80	SUM	
0.80			1	74		75		0.80				9		9	
1.20				36	235	271		1.20				17	111	128	
1.60				2	6	8		1.60					5	5	
2.00								2.00				1		1	
SUM			1	112	241	354		SUM				27	116	143	
HOURS	38.2							HOURS	39.7						
MILES	3657							MILES	4986						
NZ MANEUVER CYCLES BY VELOCITY 90, ALT 5000								NZ MANEUVER CYCLES BY VELOCITY 120, ALT 10000							
LESS	-1.25	-0.75	-0.25	0.25	0.80	SUM		LESS	-1.25	-0.75	-0.25	0.25	0.80	SUM	
0.80			1	587		589		0.80				9		9	
1.20				768	7047	7816		1.20				17	111	128	
1.60			1	62	341	404		1.60					5	5	
2.00				3	25	28		2.00				1		1	
2.50					2	2		SUM							
3.00															
SUM			1	3	1420	7415	8839								
HOURS	501.7							HOURS	3.6						
MILES	59877							MILES	921						

TABLE XIII

Maximum Positive and Correlated Maximum Negative Maneuver n_z Peaks
in Associated n_z Ranges by Gross Weight Range and Aircraft Configuration

NZ MANEUVER CYCLES BY CONFIG 2, WGT LESS								NZ MANEUVER CYCLES BY CONFIG 1, WGT 3750							
0.80	LESS	-1.25	-0.75	-0.25	0.25	0.80	SUM	0.80	LESS	-1.25	-0.75	-0.25	0.25	0.80	SUM
1.20					1		1	1.20					2	161	163
1.60					8	35	43	1.60					2	203	1185
2.00					1	12	13	2.00					2	25	85
2.50						1	1	2.50					2	8	17
3.00								3.00					1	2	3
3.50					1		1	3.50					1	1	2
4.00								4.00					1		2
SUM					12	49	61	SUM					1	9	401
HOURS	0.8							HOURS	13.6						
MILES	112							MILES	1610						

NZ MANEUVER CYCLES BY CONFIG 1, WGT 3500								NZ MANEUVER CYCLES BY CONFIG 2, WGT 3750							
0.80	LESS	-1.25	-0.75	-0.25	0.25	0.80	SUM	0.80	LESS	-1.25	-0.75	-0.25	0.25	0.80	SUM
1.20					8		8	1.20					58		58
1.60					7	46	53	1.60					78	490	568
2.00						1	1	2.00					6	40	46
SUM					15	47	62	SUM					1	16	16
HOURS	0.6							HOURS	7.9				1	15	16
MILES	78							MILES	1026				1	5	6

NZ MANEUVER CYCLES BY CONFIG 2, WGT 3500								NZ MANEUVER CYCLES BY CONFIG 3, WGT 3750							
0.80	LESS	-1.25	-0.75	-0.25	0.25	0.80	SUM	0.80	LESS	-1.25	-0.75	-0.25	0.25	0.80	SUM
1.20					6	32	38	1.20					1	110	888
1.60					1	1	2	1.60					13	71	84
2.00						2	2	2.00					4	24	28
2.50					1		1	2.50					7	13	20
3.00								3.00					4	8	12
SUM					8	35	43	SUM					3	3	3
HOURS	0.9							HOURS	11.2				1	193	1007
MILES	112							MILES	1364						1201

NZ MANEUVER CYCLES BY CONFIG 3, WGT 3500								NZ MANEUVER CYCLES BY CONFIG 4, WGT 3750							
0.80	LESS	-1.25	-0.75	-0.25	0.25	0.80	SUM	0.80	LESS	-1.25	-0.75	-0.25	0.25	0.80	SUM
1.20						1	1	1.20					3	51	569
1.60								1.60					10	66	76
2.00								2.00					8	15	23
2.50								2.50					8	8	16
3.00								3.00					4	5	9
3.50						2	2	SUM					3	119	663
4.00								HOURS	6.4						785
SUM					1	2	3	MILES	789						
HOURS	0.0														
MILES	2														

NZ MANEUVER CYCLES BY CONFIG 4, WGT 3500								NZ MANEUVER CYCLES BY CONFIG 5, WGT 3750							
0.80	LESS	-1.25	-0.75	-0.25	0.25	0.80	SUM	0.80	LESS	-1.25	-0.75	-0.25	0.25	0.80	SUM
1.20					12		12	1.20					1	78	79
1.60					9	32	41	1.60					1	88	448
2.00					1	2	3	2.00					11	31	42
2.50								2.50					1	7	8
3.00								3.00					3	1	4
3.50						1	1	3.50					2	5	7
4.00								4.00						1	1
SUM					22	35	57	SUM					2	183	493
HOURS	1.1							HOURS	7.2						678
MILES	131							MILES	917						

TABLE XIII (continued)

Maximum Positive and Correlated Maximum Negative Maneuver n_z Peaks
in Associated n_z Ranges by Gross Weight Range and Aircraft Configuration

NZ MANEUVER CYCLES BY CONFIG 7, WGT 3750						
	LESS	-1.25	-0.75	-0.25	0.25	0.80 SUM
0.80					3	3
1.20					7	10
1.60					5	5
2.00					1	4
2.50						
3.00						1
3.50						1
SUM					11	20
HOURS	0.9					
MILES	127					

NZ MANEUVER CYCLES BY CONFIG 1, WGT 4000						
	LESS	-1.25	-0.75	-0.25	0.25	0.80 SUM
0.80					378	378
1.20			2	3	497	2516
1.60			3	3	71	194
2.00					19	34
2.50					8	11
3.00				1	2	2
3.50						2
4.00						
SUM			5	7	975	2719
HOURS	53.4					
MILES	6415					

NZ MANEUVER CYCLES BY CONFIG 8, WGT 3750						
	LESS	-1.25	-0.75	-0.25	0.25	0.80 SUM
0.80					9	9
1.20					9	51
1.60					1	1
2.00						
SUM					19	52
HOURS	1.8					
MILES	223					

NZ MANEUVER CYCLES BY CONFIG 2, WGT 4000						
	LESS	-1.25	-0.75	-0.25	0.25	0.80 SUM
0.80				2	816	818
1.20				5	1177	10829
1.60				1	129	712
2.00					43	125
2.50					25	58
3.00					18	37
3.50					4	4
4.00						1
SUM				8	2212	11762
HOURS	132.1					
MILES	16263					

NZ MANEUVER CYCLES BY CONFIG 9, WGT 3750						
	LESS	-1.25	-0.75	-0.25	0.25	0.80 SUM
0.80					1	1
1.20						6
1.60						6
SUM					1	6
HOURS	0.1					
MILES	12					

NZ MANEUVER CYCLES BY CONFIG 3, WGT 4000						
	LESS	-1.25	-0.75	-0.25	0.25	0.80 SUM
0.80					146	146
1.20				2	305	3096
1.60					51	261
2.00				1	29	86
2.50					21	57
3.00					14	27
3.50					10	9
4.00					2	2
SUM				3	578	3536
HOURS	41.7					
MILES	4968					

NZ MANEUVER CYCLES BY CONFIG 10, WGT 3750						
	LESS	-1.25	-0.75	-0.25	0.25	0.80 SUM
0.80					1	1
1.20					1	13
1.60					1	2
2.00					1	2
2.50						
SUM					4	17
HOURS	1.1					
MILES	137					

NZ MANEUVER CYCLES BY CONFIG 4, WGT 4000						
	LESS	-1.25	-0.75	-0.25	0.25	0.80 SUM
0.80				1	81	82
1.20					108	1548
1.60					26	280
2.00					15	60
2.50					9	18
3.00					1	5
3.50						1
4.00						
SUM				1	240	1912
HOURS	10.5					
MILES	1358					

NZ MANEUVER CYCLES BY CONFIG 11, WGT 3750						
	LESS	-1.25	-0.75	-0.25	0.25	0.80 SUM
0.80					1	7
1.20						
1.60						
2.00						
2.50					1	1
3.00						
SUM					2	7
HOURS	0.7					
MILES	86					

NZ MANEUVER CYCLES BY CONFIG 5, WGT 4000						
	LESS	-1.25	-0.75	-0.25	0.25	0.80 SUM
0.80					61	61
1.20					92	382
1.60					11	36
2.00					6	6
2.50					2	5
3.00					1	1
3.50						1
4.00						
SUM					173	431
HOURS	11.5					
MILES	1394					

NZ MANEUVER CYCLES BY CONFIG 12, WGT 3750						
	LESS	-1.25	-0.75	-0.25	0.25	0.80 SUM
0.80					1	1
1.20					1	1
1.60					1	1
2.00						
SUM					3	1
HOURS	0.9					
MILES	103					

TABLE XIII (continued)

Maximum Positive and Correlated Maximum Negative Maneuver n_z Peaks
in Associated n_z Ranges by Gross Weight Range and Aircraft Configuration

NZ MANEUVER CYCLES BY CONFIG						6, WGT	4000
LESS -1.25 -0.75 -0.25 0.25 0.80							SUM
0.80						21	21
1.20						13	61
1.60						3	2
2.00							
SUM						37	63
HOURS	9.6						
MILES	699						

NZ MANEUVER CYCLES BY CONFIG						7, WGT	4000
LESS -1.25 -0.75 -0.25 0.25 0.80							SUM
0.80						1	71
1.20							42
1.60						1	3
2.00							1
2.50							4
3.00							1
SUM						2	117
HOURS	21.5						
MILES	2676						

NZ MANEUVER CYCLES BY CONFIG						8, WGT	4000
LESS -1.25 -0.75 -0.25 0.25 0.80							SUM
0.80						42	42
1.20						45	165
1.60						3	11
2.00						1	1
2.50							1
3.00							
SUM						91	178
HOURS	26.3						
MILES	3306						

NZ MANEUVER CYCLES BY CONFIG						9, WGT	4000
LESS -1.25 -0.75 -0.25 0.25 0.80							SUM
0.80						39	39
1.20						30	441
1.60						9	38
2.00						5	10
2.50							3
3.00							1
SUM						83	493
HOURS	49.8						
MILES	6330						

NZ MANEUVER CYCLES BY CONFIG						10, WGT	4000
LESS -1.25 -0.75 -0.25 0.25 0.80							SUM
0.80						1	1
1.20						14	187
1.60							26
2.00						7	10
2.50						2	9
3.00							
SUM						24	232
HOURS	9.8						
MILES	1192						

NZ MANEUVER CYCLES BY CONFIG						11, WGT	4000
LESS -1.25 -0.75 -0.25 0.25 0.80							SUM
0.80						4	4
1.20						9	123
1.60						3	17
2.00						5	14
2.50						6	3
3.00							
SUM						27	157
HOURS	6.4						
MILES	774						

NZ MANEUVER CYCLES BY CONFIG						12, WGT	4000
LESS -1.25 -0.75 -0.25 0.25 0.80							SUM
0.80						15	15
1.20						28	206
1.60						3	21
2.00						3	2
2.50							4
3.00							
SUM						1	49
HOURS	10.6						
MILES	1211						

NZ MANEUVER CYCLES BY CONFIG						1, WGT	4290
LESS -1.25 -0.75 -0.25 0.25 0.80							SUM
0.80						111	111
1.20						175	1306
1.60						9	52
2.00						5	15
2.50						3	5
3.00						1	1
3.50							
SUM						304	1378
HOURS	28.0						
MILES	3147						

NZ MANEUVER CYCLES BY CONFIG						2, WGT	4250
LESS -1.25 -0.75 -0.25 0.25 0.80							SUM
0.80						1	4
1.20						19	3233
1.60						6	367
2.00						5	134
2.50						1	2
3.00							65
3.50							36
4.00							11
SUM						2	36
HOURS	442.9						
MILES	53389						

NZ MANEUVER CYCLES BY CONFIG						3, WGT	4250
LESS -1.25 -0.75 -0.25 0.25 0.80							SUM
0.80							104
1.20						1	161
1.60							33
2.00							19
2.50							32
3.00							12
3.50							2
4.00							
SUM						1	363
HOURS	24.3						
MILES	2967						

NZ MANEUVER CYCLES BY CONFIG						4, WGT	4250
LESS -1.25 -0.75 -0.25 0.25 0.80							SUM
0.80						1	62
1.20						2	76
1.60							12
2.00							10
2.50						1	15
3.00							2
3.50							1
4.00							
SUM						1	3
HOURS	6.7						
MILES	853						

TABLE XIII (continued)

Maximum Positive and Correlated Maximum Negative Maneuver n_z Peaks
in Associated n_z Ranges by Gross Weight Range and Aircraft Configuration

NZ MANEUVER CYCLES BY CONFIG 5, WGT 4250						
LESS	-1.25	-0.75	-0.25	0.25	0.80	SUM
0.80				39		39
1.20				76	453	529
1.60				8	41	49
2.00				3	7	10
2.50				3	3	6
3.00				1		1
3.50						
SUM				130	504	634
HOURS	10.6					
MILES	1214					

NZ MANEUVER CYCLES BY CONFIG 6, WGT 4250						
LESS	-1.25	-0.75	-0.25	0.25	0.80	SUM
0.80				67		67
1.20				71	568	639
1.60				10	24	34
2.00				3	3	6
2.50				2		2
3.00						
SUM				153	595	748
HOURS	65.6					
MILES	7949					

NZ MANEUVER CYCLES BY CONFIG 7, WGT 4250						
LESS	-1.25	-0.75	-0.25	0.25	0.80	SUM
0.80				21		21
1.20				27	201	228
1.60				1	10	11
2.00				1	1	2
2.50						
SUM				50	212	262
HOURS	23.2					
MILES	2802					

NZ MANEUVER CYCLES BY CONFIG 8, WGT 4250						
LESS	-1.25	-0.75	-0.25	0.25	0.80	SUM
0.80				1		1
1.20				1	31	32
1.60					2	2
2.00						
SUM				4	33	37
HOURS	3.0					
MILES	372					

NZ MANEUVER CYCLES BY CONFIG 9, WGT 4250						
LESS	-1.25	-0.75	-0.25	0.25	0.80	SUM
0.80				54		54
1.20				100	1910	2010
1.60				16	129	145
2.00				14	26	41
2.50			1	5	12	17
3.00				1		1
3.50						
SUM			1	190	2077	2268
HOURS	149.0					
MILES	17737					

NZ MANEUVER CYCLES BY CONFIG 10, WGT 4250						
LESS	-1.25	-0.75	-0.25	0.25	0.80	SUM
0.80				20		20
1.20				31	413	444
1.60				11	62	73
2.00				7	27	34
2.50				6	9	15
3.00				3	2	5
3.50						
SUM				78	513	591
HOURS	11.4					
MILES	1358					

NZ MANEUVER CYCLES BY CONFIG 11, WGT 4250						
LESS	-1.25	-0.75	-0.25	0.25	0.80	SUM
0.80						
1.20				5	90	95
1.60				4	12	16
2.00				2	7	9
2.50				1	1	2
3.00					1	1
3.50				1		1
4.00						
SUM				13	111	124
HOURS	1.0					
MILES	122					

NZ MANEUVER CYCLES BY CONFIG 12, WGT 4250						
LESS	-1.25	-0.75	-0.25	0.25	0.80	SUM
0.80				3		3
1.20				13	49	62
1.60				3	7	10
2.00				3	3	6
2.50					1	1
3.00				2		2
3.50						
SUM				24	60	84
HOURS	1.6					
MILES	190					

NZ MANEUVER CYCLES BY CONFIG 2, WGT 4500						
LESS	-1.25	-0.75	-0.25	0.25	0.80	SUM
0.80				6	1134	1140
1.20			1	4	1307	12918
1.60				3	113	676
2.00				2	38	166
2.50				1	24	62
3.00				1	7	22
3.50					3	4
4.00						
SUM			1	17	2646	12060
HOURS	266.7					
MILES	31554					

NZ MANEUVER CYCLES BY CONFIG 3, WGT 4500						
LESS	-1.25	-0.75	-0.25	0.25	0.80	SUM
0.80				22		22
1.20				42	402	444
1.60				6	42	48
2.00				10	14	24
2.50				3	2	5
3.00				1	4	5
3.50				2		2
4.00						
SUM				86	464	550
HOURS	12.0					
MILES	1416					

NZ MANEUVER CYCLES BY CONFIG 4, WGT 4500						
LESS	-1.25	-0.75	-0.25	0.25	0.80	SUM
0.80						
1.20					18	18
1.60				1	7	8
2.00					3	3
2.50				1		1
3.00				1		1
3.50						
SUM				3	28	31
HOURS	0.2					
MILES	25					

TABLE XIII (concluded)

Maximum Positive and Correlated Maximum Negative Maneuver n_z Peaks
in Associated n_z Ranges by Gross Weight Range and Aircraft Configuration

NZ MANEUVER CYCLES BY CONFIG 6, WGT 4500						
	LESS	-1.25	-0.75	-0.25	0.25	0.80
0.80				1	71	72
1.20					81	807
1.60				1	6	44
2.00					1	6
2.50					1	1
3.00						1
3.50						
SUM				2	160	858

HOURS 147.3
MILES 17280

NZ MANEUVER CYCLES BY CONFIG 7, WGT 4500						
	LESS	-1.25	-0.75	-0.25	0.25	0.80
0.80						8
1.20						1
1.60						
2.00						1
2.50						
SUM						9

HOURS 1.1
MILES 133

NZ MANEUVER CYCLES BY CONFIG 9, WGT 4500						
	LESS	-1.25	-0.75	-0.25	0.25	0.80
0.80				2	61	63
1.20				1	93	1735
1.60					12	84
2.00				1	8	18
2.50					5	8
3.00					1	1
3.50						
SUM				4	180	1845

HOURS 256.1
MILES 29448

NZ MANEUVER CYCLES BY CONFIG 10, WGT 4500						
	LESS	-1.25	-0.75	-0.25	0.25	0.80
0.80					1	1
1.20					1	68
1.60						12
2.00					2	3
2.50						
SUM					4	83

HOURS 1.7
MILES 195

NZ MANEUVER CYCLES BY CONFIG 2, WGT 4750						
	LESS	-1.25	-0.75	-0.25	0.25	0.80
0.80					71	71
1.20					69	315
1.60					1	7
2.00						1
2.50						
3.00					1	1
3.50						
SUM					142	323

HOURS 11.9
MILES 1334

NZ MANEUVER CYCLES BY CONFIG 6, WGT 4750						
	LESS	-1.25	-0.75	-0.25	0.25	0.80
0.80					120	120
1.20					63	204
1.60						1
2.00						1
2.50						
SUM					183	206

HOURS 69.3
MILES 7510

NZ MANEUVER CYCLES BY CONFIG 9, WGT 4750						
	LESS	-1.25	-0.75	-0.25	0.25	0.80
0.80					58	58
1.20					55	276
1.60					3	8
2.00					4	4
2.50						
SUM					120	284

HOURS 84.0
MILES 9286

TABLE XIV

Maneuver n_z Peaks in Coincident n_z and Airspeed Ranges

NZ MANEUVER PEAKS FOR VELOCITY VS NZ SUM						
	LESS	60	90	120	150	SUM
4.00					7	7
3.50			1	5	63	69
3.00			2	49	249	300
2.50			18	236	493	747
2.00		1	171	912	560	1644
1.60		45	2131	3611	760	6547
1.20		2184	47010	32735	3423	85352
0.80						
0.25	60	1170	8281	6137	1094	16742
-0.25	7	12	33	34	15	101
-0.75	6	1	2	1		10
-1.25						
SUM	73	3413	57649	43720	6664	111519
HOURS	0.2	90.7	1530.6	403.7	27.4	2052.6
MILES	11	8282	175721	55200	4519	243733

TABLE XV

Maneuver n_z Peaks in Coincident n_z and Airspeed Ranges
by Mission Type and Gross Weight Range

NZ MANEUVER PEAKS FOR VELOCITY VS NZ BY WEIGHT LESS, MIS COMBAT						
	LESS	60	90	120	150	SUM
4.00					1	1
3.50					2	2
3.00					1	1
2.50					3	13
2.00			1	9	3	13
1.60			9	21	10	43
1.20		3				
0.80			1	2	9	12
0.25						
-0.25						
SUM		3	11	32	26	72
HOURS	0.	0.0	0.2	0.5	0.1	0.8
MILES	0	3	20	71	18	112

NZ MANEUVER PEAKS FOR VELOCITY VS NZ BY WEIGHT 3750. MIS COMBAT						
	LESS	60	90	120	150	SUM
4.00					4	4
3.50				4	32	36
3.00				26	34	63
2.50			3	54	21	95
2.00			20	168	34	301
1.60		4	95	1490	202	3403
1.20		68	1643			
0.80						
0.25		37	346	352	62	797
-0.25			2	3	2	7
-0.75						
SUM		109	2109	2097	391	4706
HOURS	0.	1.2	26.2	17.0	1.8	46.1
MILES	0	101	2997	2326	289	5723

NZ MANEUVER PEAKS FOR VELOCITY VS NZ BY WEIGHT 3900. MIS COMBAT						
	LESS	60	90	120	150	SUM
4.00					2	2
3.50					1	1
3.00					1	1
2.50					1	1
2.00					2	2
1.60			2	3	1	6
1.20		1	42	23	17	83
0.80						
0.25		4	16	12	1	33
-0.25						
SUM		5	60	39	24	128
HOURS	0.	0.1	1.3	0.8	0.1	2.3
MILES	0	6	153	107	24	290

NZ MANEUVER PEAKS FOR VELOCITY VS NZ BY WEIGHT 4000. MIS COMBAT						
	LESS	60	90	120	150	SUM
4.00					3	3
3.50					24	25
3.00				22	86	108
2.50			5	75	150	230
2.00			40	234	171	445
1.60		4	498	1036	195	1731
1.20		495	9867	8859	995	20216
0.80						
0.25	5	222	1674	1694	345	3940
-0.25		1	5	7	4	17
-0.75						
SUM	5	722	12087	11928	1973	26715
HOURS	0.0	13.2	214.5	109.8	6.6	344.1
MILES	3	1191	24997	15077	1099	42367

TABLE XV (concluded)

Maneuver n_z Peaks in Coincident n_z and Airspeed Ranges
by Mission Type and Gross Weight Range

NZ MANEUVER PEAKS FOR VELOCITY VS NZ BY WEIGHT 4250+ MIS COMBAT

	LESS	60	90	120	150	SUM
4.00					4	4
3.50				1	26	27
3.00			1	17	99	117
2.50			6	105	224	335
2.00			69	454	247	770
1.60		15	995	1740	376	3126
1.20		811	21743	16133	1396	40103
0.80						
0.25	14	431	3387	2790	436	7058
-0.25	1	4	14	16	5	41
-0.75	1		1	1		3
-1.25						
SUM	16	1262	26216	21277	2813	51984
HOURS	0.0	26.9	527.6	168.5	9.9	732.9
MILES	2	2451	61087	22980	1647	88167

NZ MANEUVER PEAKS FOR VELOCITY VS NZ BY WEIGHT 4500+ MIS COMBAT

	LESS	60	90	120	150	SUM
4.00					4	4
3.50				4	20	24
3.00				20	50	72
2.50			2	125	74	216
2.00			17	531	121	980
1.60		1	327	4995	596	15504
1.20		367	9546			
0.80						
0.25	4	197	1701	944	153	2999
-0.25		1	10	7	4	22
-0.75			1			1
-1.25						
SUM	4	566	11604	6626	1022	19822
HOURS	0.0	28.8	561.1	78.8	6.5	675.2
MILES	1	2670	64330	10748	1067	78866

NZ MANEUVER PEAKS FOR VELOCITY VS NZ BY WEIGHT 4750+ MIS COMBAT

	LESS	60	90	120	150	SUM
3.50					1	1
3.00						
2.50			1	3	2	6
2.00			8	9	2	20
1.60		1	762	154	15	975
1.20		44				
0.80						
0.25	4	74	307	41	12	438
-0.25						
SUM	4	119	1078	207	32	1440
HOURS	0.0	14.3	142.9	6.3	0.9	164.4
MILES	0	1320	19728	846	150	18044

NZ MANEUVER PEAKS FOR VELOCITY VS NZ BY WEIGHT 3500+ MIS OTHER

	LESS	60	90	120	150	SUM
1.60						
1.20			25	13	13	51
0.80						
0.25			4	9	1	14
-0.25						
SUM			29	22	14	65
HOURS	0.0	0.0	0.4	0.2	0.0	0.6
MILES	0	0	44	23	3	70

NZ MANEUVER PEAKS FOR VELOCITY VS NZ BY WEIGHT 3750+ MIS OTHER

	LESS	60	90	120	150	SUM
4.00						
3.50			1	1		2
3.00			1			1
2.50		1	7	4	3	15
2.00		4	44	20	2	70
1.60		49	568	189	15	821
1.20						
0.80						
0.25	1	28	189	68	4	290
-0.25	2	4	2			8
-0.75		1				1
-1.25						
SUM	3	87	812	282	24	1208
HOURS	0.0	0.3	3.8	1.5	0.1	5.7
MILES	0	29	425	208	10	672

NZ MANEUVER PEAKS FOR VELOCITY VS NZ BY WEIGHT 4000+ MIS OTHER

	LESS	60	90	120	150	SUM
4.00				2		2
3.50				1	1	2
3.00						
2.50			1	4	8	13
2.00			9	12	21	42
1.60		9	83	46	22	160
1.20		150	1224	455	97	1926
0.80						
0.25	14	90	388	140	39	671
-0.25	4			1		5
-0.75	5					5
-1.25						
SUM	23	249	1705	661	188	2826
HOURS	0.0	2.1	20.6	11.5	0.8	35.1
MILES	3	178	2300	1596	142	4219

NZ MANEUVER PEAKS FOR VELOCITY VS NZ BY WEIGHT 4250+ MIS OTHER

	LESS	60	90	120	150	SUM
3.50					4	4
3.00					4	4
2.50			1	4	16	21
2.00			5	15	15	35
1.60		6	65	38	4	113
1.20		175	1401	309	65	1950
0.80						
0.25	13	71	241	72	24	421
-0.25						
SUM	13	252	1713	438	128	2544
HOURS	0.0	3.0	24.7	6.4	0.4	34.5
MILES	1	255	2738	877	63	3934

NZ MANEUVER PEAKS FOR VELOCITY VS NZ BY WEIGHT 4500+ MIS OTHER

	LESS	60	90	120	150	SUM
4.00					2	2
3.50					5	5
3.00				1	8	10
2.50				2	4	17
2.00			3	10	17	27
1.60		1	15	17	2	270
1.20		21	175	72		
0.80						
0.25	5	16	24	13	8	66
-0.25		1				1
-0.75						
SUM	5	39	217	109	29	399
HOURS	0.0	0.8	6.9	2.3	0.0	10.0
MILES	0	70	786	320	7	1183

NZ MANEUVER PEAKS FOR VELOCITY VS NZ BY WEIGHT 4750+ MIS OTHER

	LESS	60	90	120	150	SUM
1.60						
1.20			5	2		7
0.80						
0.25			3			3
-0.25						
SUM			8	2		10
HOURS	0.0	0.1	0.6	0.1	0.0	0.8
MILES	0	7	68	11	0	86

TABLE XVI

Maneuver n_z Peaks in Coincident n_z and Airspeed Ranges
by Mission Type and Altitude Range

NZ MANEUVER PEAKS FOR VELOCITY VS NZ BY ALTITUDE LESS MIS COMBAT							NZ MANEUVER PEAKS FOR VELOCITY VS NZ BY ALTITUDE LESS MIS OTHER						
	LESS	60	90	120	150	SUM		LESS	60	90	120	150	SUM
4.00					1	1	3.50						
3.50					1	1	3.00				1	2	3
3.00				5	15	20	2.50					3	3
2.50				6	20	26	2.00			7	9	1	17
2.00			3	38	16	57	1.60		6	111	29		146
1.60		2	63	181	27	273	1.20		289	1656	171	26	2130
1.20		241	2307	1497	202	4247	0.80						
0.80							0.25	4	75	314	55	11	459
0.25		88	514	358	91	1051	-0.25			1			1
-0.25			1	2	1	4	-0.75						
-0.75							SUM	4	366	2089	265	43	2767
SUM		331	2888	2087	374	5680	HOURS	0.0	3.0	14.0	1.2	0.1	18.4
HOURS	0.0	6.3	35.9	14.9	3.3	60.4	MILES	2	253	1447	160	18	1880
MILES	0	537	3724	2052	513	4826							

NZ MANEUVER PEAKS FOR VELOCITY VS NZ BY ALTITUDE 1000 MIS COMBAT							NZ MANEUVER PEAKS FOR VELOCITY VS NZ BY ALTITUDE 1000 MIS OTHER						
	LESS	60	90	120	150	SUM		LESS	60	90	120	150	SUM
4.00					4	4	3.50						
3.50				1	22	23	3.00					4	4
3.00				19	96	115	2.50					1	1
2.50			9	74	147	230	2.00			3	7	4	14
2.00			38	244	181	463	1.60		1	19	21	4	45
1.60		3	478	956	203	1642	1.20		22	469	307	65	863
1.20		511	10891	8289	1072	20763	0.80						
0.80							0.25	22	161	89	19	287	
0.25	4	128	1534	1545	319	3530	-0.25						
-0.25			6	9	4	19	-0.75						
-0.75				1		1	SUM	46	652	424	93	1215	
-1.25							HOURS	0.0	0.5	8.6	5.0	0.4	14.3
SUM	4	642	12956	1158	2050	26810	MILES	0	40	940	678	58	1716
HOURS	0.0	11.6	144.2	57.5	7.0	220.4							
MILES	1	1001	15739	7724	1125	23590							

NZ MANEUVER PEAKS FOR VELOCITY VS NZ BY ALTITUDE 2000 MIS COMBAT							NZ MANEUVER PEAKS FOR VELOCITY VS NZ BY ALTITUDE 2000 MIS OTHER						
	LESS	60	90	120	150	SUM		LESS	60	90	120	150	SUM
4.00					2	2	3.50						
3.50					32	32	3.00				1	3	4
3.00			1	15	101	117	2.50				1	1	2
2.50			6	107	215	328	2.00				1	6	11
2.00			76	421	263	760	1.60			1	14	18	33
1.60		13	979	1684	396	3072	1.20		12	48	49	21	146
1.20		783	22607	17017	1682	42089	0.80		68	1006	474	83	1631
0.80							0.25	21	66	297	122	31	537
0.25	14	512	3900	3243	504	8173	-0.25	5	4	1	1		11
-0.25	1	6	17	19	9	32	-0.75	5	1				6
-0.75							-1.25						
SUM	15	1314	27586	22506	3204	54625	SUM	31	152	1389	671	174	2417
HOURS	0.1	26.8	785.9	215.7	13.0	1021.4	HOURS	0.0	1.9	20.8	12.9	0.7	36.3
MILES	4	2391	86661	29152	2177	120385	MILES	2	161	2349	1771	117	4400

NZ MANEUVER PEAKS FOR VELOCITY VS NZ BY ALTITUDE 5000 MIS COMBAT							NZ MANEUVER PEAKS FOR VELOCITY VS NZ BY ALTITUDE 5000 MIS OTHER						
	LESS	60	90	120	150	SUM		LESS	60	90	120	150	SUM
4.00					1	1	3.50						
3.50					6	7	3.00						
3.00					27	35	2.50						
2.50			1	39	79	119	2.00				1	3	4
2.00			28	147	57	232	1.60				2	17	20
1.60		7	395	670	104	1176	1.20				7	13	20
1.20		252	7558	4785	275	12850	0.80			1	9	20	33
0.80							0.25		19	258	87	18	382
0.25	9	27	1415	669	104	2423	0.00						
-0.25		1	6	3	1	11	0.25	8	41	76	36	19	180
-0.75	1		1			2	-0.25	1					1
-1.25							-0.75						
SUM	10	486	9404	6302	653	1555	SUM	9	61	344	153	73	640
HOURS	0.0	37.3	491.3	90.2	2.7	6.0	HOURS	0.0	0.9	10.4	2.7	0.2	14.2
MILES	1	3576	58655	12752	478	75	MILES	1	82	1272	390	32	1727

NZ MANEUVER PEAKS FOR VELOCITY VS NZ BY ALTITUDE 10000 MIS COMBAT							NZ MANEUVER PEAKS FOR VELOCITY VS NZ BY ALTITUDE 10000 MIS OTHER						
	LESS	60	90	120	150	SUM		LESS	60	90	120	150	SUM
3.50							1.60						
2.00			2	1		3	1.20			1	9	1	11
1.60			9	5		14	0.80						
1.20		2	249	127		378	0.25			1	1		2
0.80							-0.25						
0.25		11	69	20		100	SUM		2	10	1		13
-0.25			1			1	HOURS	0.0	0.0	3.2	0.2	0.0	3.5
-0.75							MILES	0	4	404	56	0	444
-1.25													
SUM		13	331	153		497							
HOURS	0.0	2.4	36.4	3.4	0.0	42.2							
MILES	0	238	4582	485	0	5305							

TABLE XVII

Maneuver n_z Peaks in Coincident n_z and Airspeed Ranges
by Altitude Range

NZ MANEUVER PEAKS FOR VELOCITY VS NZ BY ALTITUDE LESS

	LESS	60	90	120	150	SUM
4.00					1	1
3.50					1	1
3.00				6	17	23
2.50				6	23	29
2.00			10	47	17	74
1.60		8	174	210	27	419
1.20		526	3963	1668	228	6385
0.80						
0.25	4	163	628	413	102	1510
-0.25			2	2	1	5
-0.75						
SUM	4	697	4977	2352	417	8447
HOURS	0.0	9.3	49.9	16.1	3.4	78.8
MILES	2	790	5170	2212	531	8705

NZ MANEUVER PEAKS FOR VELOCITY VS NZ BY ALTITUDE 1000

	LESS	60	90	120	150	SUM
4.00					4	4
3.50				1	22	23
3.00				19	100	119
2.50			9	74	148	231
2.00			41	271	185	497
1.60		4	497	977	209	1687
1.20		533	11360	8596	1137	21626
0.80						
0.25	4	150	1695	1634	334	3817
-0.25		1	6	9	4	20
-0.75				1		1
-1.25						
SUM	4	688	13608	11582	2143	28025
HOURS	0.0	12.1	152.8	62.5	7.4	234.7
MILES	1	1042	16679	8402	1183	27307

NZ MANEUVER PEAKS FOR VELOCITY VS NZ BY ALTITUDE 5000

	LESS	60	90	120	150	SUM
4.00					1	1
3.50					9	9
3.00					30	30
2.50			2	41	96	139
2.00			28	154	70	252
1.60		8	404	690	107	1209
1.20		271	7816	4852	293	13232
0.80						
0.25	17	267	1491	705	123	2603
-0.25	1	1	6	3	1	12
-0.75	1		1			2
-1.25						
SUM	19	547	9748	6455	726	17495
HOURS	0.0	38.2	501.7	92.9	2.9	635.7
MILES	2	3657	59877	13142	510	77188

NZ MANEUVER PEAKS FOR VELOCITY VS NZ BY ALTITUDE 2000

	LESS	60	90	120	150	SUM
4.00					2	2
3.50			1	3	34	38
3.00			2	15	102	119
2.50			7	115	226	348
2.00		1	90	439	288	818
1.60		25	1047	1729	417	3218
1.20		851	23613	17491	1765	43720
0.80						
0.25	35	578	4197	3365	535	8710
-0.25	6	10	18	20	9	63
-0.75	5	1				6
-1.25						
SUM	46	1466	28975	23177	3378	57042
HOURS	0.1	28.7	786.6	228.6	13.7	1057.7
MILES	6	2552	89009	30923	2295	124785

NZ MANEUVER PEAKS FOR VELOCITY VS NZ BY ALTITUDE 10000

	LESS	60	90	120	150	SUM
2.50						
2.00			2	1		3
1.60			9	5		14
1.20		3	258	128		389
0.80						
0.25		12	70	20		102
-0.25			1			1
-0.75			1			1
-1.25						
SUM		15	341	154		510
HOURS	0.0	2.5	39.7	3.6	0.0	45.7
MILES	0	242	4986	521	0	5749

TABLE XVIII

Maneuver n_z Peaks in Coincident n_z Ranges and
Mission Segments by Mission Type

NZ MANEUVER PEAKS FOR MIS-SEG VS NZ BY MISSION COMBAT

	ASCENT	CRUISE	MANUVR	DESCNT	SUM
4.00			7		7
3.50			63		63
3.00	1		277	9	287
2.50			68	22	90
2.00	5	13	1461	56	1535
1.60	32	56	5802	287	6177
1.20	2117	2664	70560	4986	80327
0.80					
0.25	930	637	11980	1730	15277
-0.25		2	75	10	87
-0.75			4		4
-1.25					
SUM	3085	3372	90910	7100	104467
HOURS	153.2	876.7	838.7	97.2	1965.8
MILES	16487	104514	100301	12256	233558

NZ MANEUVER PEAKS FOR MIS-SEG VS NZ BY MISSION OTHER

	ASCENT	CRUISE	MANUVR	DESCNT	SUM
4.00					
3.50			6		6
3.00			12	1	13
2.50	1		42	1	44
2.00	7		91	11	109
1.60	61	1	216	92	370
1.20	984	101	2155	1785	5025
0.80					
0.25	293	24	761	387	1465
-0.25		1	11	2	14
-0.75			6		6
-1.25					
SUM	1346	127	3300	2279	7052
HOURS	18.5	19.7	30.7	17.9	86.7
MILES	1962	2493	3691	2020	10166

TABLE XIX

Maneuver n_z Peaks in Coincident n_z and Airspeed Ranges by Altitude Range and Aircraft Configuration

NZ MANEUVER PEAKS FOR VELOCITY VS NZ BY CONFIG 1 . ALT LESS							NZ MANEUVER PEAKS FOR VELOCITY VS NZ BY CONFIG 7 . ALT LESS						
LESS	60	90	120	150	SUM		LESS	60	90	120	150	SUM	
3.50							2.00						
3.00							1.60		1	1		2	
2.50							1.20		15		1	19	
2.00			7	7	15		0.80	2					
1.60		6	96	21	124		0.25		3			3	
1.20		246	1382	209	1865		-0.25						
0.80							SUM	2	19	2	1	24	
0.25	4	68	292	66	440		HOURS	0.0	0.1	0.5	0.0	0.0	0.6
-0.25			1		1		MILES	0	7	47	3	1	58
-0.75							NZ MANEUVER PEAKS FOR VELOCITY VS NZ BY CONFIG 8 . ALT LESS						
SUM	4	320	1778	305	2449		LESS	60	90	120	150	SUM	
HOURS	0.0	2.2	11.8	1.2	0.1	15.9	2.00						
MILES	2	230	1219	158	19	1628	1.60		2	2		4	
NZ MANEUVER PEAKS FOR VELOCITY VS NZ BY CONFIG 2 . ALT LESS							1.20		37	10		51	
LESS	60	90	120	150	SUM		0.80						
4.00							0.25		6	1		7	
3.50							-0.25						
3.00				4	11	15	SUM	4	45	13		62	
2.50				3	14	17	HOURS	0.0	0.1	0.6	0.1	0.0	0.8
2.00			3	31	12	46	MILES	0	8	63	12	0	83
1.60		1	50	143	22	216	NZ MANEUVER PEAKS FOR VELOCITY VS NZ BY CONFIG 9 . ALT LESS						
1.20		173	1509	988	159	2809	LESS	60	90	120	150	SUM	
0.80							2.50						
0.25		56	357	273	75	761	2.00			4	1	5	
-0.25				2	1	3	1.60		1		24	2	31
-0.75							1.20		18	145	112	8	483
SUM		230	1919	1424	296	3869	0.80						
HOURS	0.0	3.2	17.5	11.6	2.9	35.1	0.25		13	25	32		70
MILES	0	270	1829	1608	451	4158	-0.25			1			1
NZ MANEUVER PEAKS FOR VELOCITY VS NZ BY CONFIG 3 . ALT LESS							-0.75						
LESS	60	90	120	150	SUM		SUM	32	175	372	11	590	
3.50							HOURS	0.0	1.6	6.9	1.7	0.0	10.2
3.00							MILES	0	134	700	226	8	1068
2.50							NZ MANEUVER PEAKS FOR VELOCITY VS NZ BY CONFIG 10 . ALT LESS						
2.00							LESS	60	90	120	150	SUM	
1.60			4	5	1	10	1.60						
1.20		29	241	77	11	358	1.20			19	3	22	
0.80							0.80						
0.25		5	41	16	12	74	0.25		1	8	1	10	
-0.25							-0.25						
SUM		34	286	101	34	455	SUM	1	27	4		32	
HOURS	0.0	0.4	2.3	0.6	0.2	3.3	HOURS	0.0	0.1	0.7	0.0	0.0	0.8
MILES	0	30	235	75	27	367	MILES	0	6	74	6	0	86
NZ MANEUVER PEAKS FOR VELOCITY VS NZ BY CONFIG 4 . ALT LESS							NZ MANEUVER PEAKS FOR VELOCITY VS NZ BY CONFIG 11 . ALT LESS						
LESS	60	90	120	150	SUM		LESS	60	90	120	150	SUM	
3.50							1.60						
3.00							1.20		1	22	1	24	
2.50							0.80						
2.00							SUM	1	22	1		24	
1.60			5	2	1	8	HOURS	0.0	0.0	0.5	0.0	0.0	0.5
1.20		4	83	42	12	141	MILES	0	3	50	1	0	54
0.80							NZ MANEUVER PEAKS FOR VELOCITY VS NZ BY CONFIG 12 . ALT LE						
0.25			11	9	3	23	LESS	60	90	120	150	SUM	
-0.25							2.00						
SUM		4	99	53	19	175	1.60		1			1	
HOURS	0.0	0.0	0.5	0.4	0.1	1.1	1.20	2	74	4		80	
MILES	0	4	57	58	19	138	0.80		1	10		11	
NZ MANEUVER PEAKS FOR VELOCITY VS NZ BY CONFIG 5 . ALT LESS							0.25						
LESS	60	90	120	150	SUM		-0.25		3	85	4	92	
3.50							SUM						
3.00				1	1	2	HOURS	0.0	0.2	1.6	0.0	0.0	1.8
2.50					2	2	MILES	0	18	164	5	2	189
2.00				3	2	3	NZ MANEUVER PEAKS FOR VELOCITY VS NZ BY CONFIG 1 . ALT 1000						
1.60			9	10	19		LESS	60	90	120	150	SUM	
1.20		44	339	34	9	426	3.50						
0.80							3.00					3	3
0.25		14	47	9	2	72	2.50			2	1	5	8
-0.25							2.00			10	10	7	27
SUM		58	395	57	14	524	1.60		1	51	41	17	110
HOURS	0.0	0.4	2.8	0.3	0.0	3.6	1.20		42	1114	461	85	1702
MILES	0	35	290	43	4	372	0.80						
NZ MANEUVER PEAKS FOR VELOCITY VS NZ BY CONFIG 6 . ALT LESS							0.25		32	252	132	27	443
LESS	60	90	120	150	SUM		-0.25		1			1	2
2.50							-0.75						
2.00				1	1		SUM	76	1429	645	145	2295	
1.60			2	2	4		HOURS	0.0	0.5	16.9	5.3	0.5	23.6
1.20		3	97	7	107		MILES	0	78	1834	727	75	2714
0.80													
0.25		5	28	6	39								
-0.25													
SUM		8	127	16	151								
HOURS	0.0	0.5	4.4	0.1	0.0	5.0							
MILES	0	44	443	18	0	505							

TABLE XIX (continued)

Maneuver n_z Peaks in Coincident n_z and Airspeed
Ranges by Altitude Range and Aircraft Configuration

NZ MANEUVER PEAKS FOR VELOCITY VS NZ BY CONFIG							2	ALT	1000	NZ MANEUVER PEAKS FOR VELOCITY VS NZ BY CONFIG							8	ALT	1000			
4.00	LESS	60	90	120	150	SUM				2.00	LESS	60	90	120	150	SUM						
3.50					3	3				1.60			1	1	1	3						
3.00				9	9	9				1.20		2	12	14	1	29						
2.50			6	34	64	104				0.80												
2.00			21	149	92	262				0.25			8	7		15						
1.60		2	343	598	126	1069				-0.25												
1.20		461	8965	6401	685	16512				SUM		2	21	22	2	47						
0.80										HOURS	0.	0.2	0.5	0.4	0.0	1.1						
0.25	3	104	1186	1173	201	2667				MILES	0	19	56	51	4	130						
-0.25			5	6	2	15				NZ MANEUVER PEAKS FOR VELOCITY VS NZ BY CONFIG										9	ALT	1000
-0.75				1		1				3.50	LESS	60	90	120	150	SUM						
-1.25										3.00						1	1					
SUM	3	567	10526	8373	1229	20698				2.50				4	7	11						
HOURS	0.0	9.1	105.8	44.6	5.3	164.8				2.00				11	5	16						
MILES	1	781	11593	5982	847	19206				1.60			4	15	2	21						
NZ MANEUVER PEAKS FOR VELOCITY VS NZ BY CONFIG							3	ALT	1000	1.20				94	8	256						
4.00	LESS	60	90	120	150	SUM				0.80		3	151	20	4	56						
3.50					1	1				0.25		5	27	20	4	56						
3.00				6	30	36				-0.25												
2.50				18	43	62				SUM		8	182	144	27	361						
2.00				40	28	76				HOURS	0.	0.8	11.5	1.9	0.2	14.4						
1.60			1	84	101	12	178			MILES	0	67	1238	255	34	1594						
1.20		20	645	571	67	1303				NZ MANEUVER PEAKS FOR VELOCITY VS NZ BY CONFIG										10	ALT	1000
0.80										3.50	LESS	60	90	120	150	SUM						
0.25		3	67	119	38	227				3.00						1	1					
-0.25										2.50				2	6	8						
SUM		24	785	855	228	1892				2.00				9	10	19						
HOURS	0.0	0.5	6.4	4.2	0.5	11.6				1.60			1	18	3	22						
MILES	0	41	706	566	79	1392				1.20			13	16	3	32						
NZ MANEUVER PEAKS FOR VELOCITY VS NZ BY CONFIG							4	ALT	1000	0.80												
4.00	LESS	60	90	120	150	SUM				0.25			8	2	4	14						
3.50					2	2				-0.25												
3.00				4	10	14				SUM			22	47	27	96						
2.50				12	13	25				HOURS	0.	0.	0.7	0.3	0.1	1.0						
2.00				45	23	70				MILES	0	0	75	39	9	123						
1.60			2	174	40	236				NZ MANEUVER PEAKS FOR VELOCITY VS NZ BY CONFIG										11	ALT	1000
1.20		1	200	845	255	1301				4.00	LESS	60	90	120	150	SUM						
0.80										3.50						1	1					
0.25		1	39	123	41	204				3.00						5	6					
-0.25			1	1	1	3				2.50				1	5	6						
-0.75										2.00				2	12	14						
SUM		2	266	1204	385	1857				1.60				5	4	9						
HOURS	0.	0.0	1.8	3.0	0.5	5.4				1.20			15	6	3	24						
MILES	0	2	206	414	87	709				0.80												
NZ MANEUVER PEAKS FOR VELOCITY VS NZ BY CONFIG							5	ALT	1000	0.25				2	5	12						
4.00	LESS	60	90	120	150	SUM				-0.25												
3.50					1	1				SUM		1	19	16	10	66						
3.00					6	6				HOURS	0.	0.0	0.5	0.2	0.1	0.7						
2.50					3	3				MILES	0	2	52	24	9	87						
2.00					4	5				NZ MANEUVER PEAKS FOR VELOCITY VS NZ BY CONFIG										12	ALT	1000
1.60			8	19	3	30				3.50	LESS	60	90	120	150	SUM						
1.20		4	183	157	10	354				3.00						2	2					
0.80										2.50						2	2					
0.25	1	4	74	46	8	133				2.00				1	3	4						
-0.25										1.60				4	1	5						
SUM	1	8	265	229	36	539				1.20			14	13	9	36						
HOURS	0.0	0.1	2.4	1.8	0.1	4.3				0.80												
MILES	0	9	260	238	12	519				0.25			5	8	4	17						
NZ MANEUVER PEAKS FOR VELOCITY VS NZ BY CONFIG							6	ALT	1000	-0.25												
2.00	LESS	60	90	120	150	SUM				SUM		19	26	21	66							
1.60					1	1				HOURS	0.	0.0	0.8	0.3	0.1	1.2						
1.20				33	16	59				MILES	0	3	86	39	15	143						
0.80										NZ MANEUVER PEAKS FOR VELOCITY VS NZ BY CONFIG										1	ALT	2000
0.25				23	2	26				4.00	LESS	60	90	120	150	SUM						
-0.25										3.50												
SUM				56	19	86				3.00				3		4						
HOURS	0.	0.4	5.0	0.4	0.1	5.9				2.50					1	2						
MILES	0	38	517	50	9	614				2.00				9	8	18						
NZ MANEUVER PEAKS FOR VELOCITY VS NZ BY CONFIG							7	ALT	1000	1.60				11	22	46						
2.00	LESS	60	90	120	150	SUM				1.20				40	26	136						
1.60										0.80												
1.20										0.25		9	57	343	190	62	661					
0.80				19	2	18				-0.25		5	3	1	1	1	11					
0.25										-0.75		5	1				6					
-0.25				2	1	3				-1.25												
SUM				18	2	22				SUM		19	121	1536	1016	265	2957					
HOURS	0.	0.0	0.5	0.1	0.0	0.7				HOURS	0.0	1.5	27.4	15.8	1.2	65.7						
MILES	0	2	54	17	4	77				MILES	1	127	3118	2145	199	5590						

TABLE XIX (continued)

Maneuver n_z Peaks in Coincident n_z and Airspeed
Ranges by Altitude Range and Aircraft Configuration

NZ MANEUVER PEAKS FOR VELOCITY VS n_z BY CONFIG 2 • ALT 2000							NZ MANEUVER PEAKS FOR VELOCITY VS n_z BY CONFIG 8 • ALT 2000						
LESS	60	90	120	150	SUM		LESS	60	90	120	150	SUM	
4.00				1	1		2.00			3		3	
3.50				13	13		1.60						
3.00		1	8	62	71		1.20		11	27	11	49	
2.50		5	46	121	172		0.80						
2.00		45	235	193	433		0.25		1	6	5	2	14
1.60		5	592	1143	311	2051	-0.25						
1.20		572	16209	12959	1294	31034	SUM		1	17	35	13	66
0.80							HOURS	0.0	0.1	0.8	0.7	0.1	1.7
0.25	6	287	3014	2586	348	6241	MILES	0	5	93	101	9	208
-0.25	1	6	10	13	6	36	NZ MANEUVER PEAKS FOR VELOCITY VS n_z BY CONFIG 9 • ALT 2000						
-0.75							LESS	60	90	120	150	SUM	
SUM	7	870	19876	16990	2309	40052	3.50					2	2
HOURS	0.0	14.1	295.7	131.6	7.9	449.4	3.00					12	20
MILES	1	1253	33404	17822	1523	53803	2.50					19	66
NZ MANEUVER PEAKS FOR VELOCITY VS n_z BY CONFIG 3 • ALT 2000							2.00		8	39			
LESS	60	90	120	150	SUM		1.60		1	102	117	10	230
4.00				1	1		1.20		45	2483	1028	37	3593
3.50				20	20		0.80						
3.00			1	28	29		0.25	4	59	198	87	15	363
2.50			1	29	47	77	-0.25						
2.00			12	72	49	133	SUM	4	105	2794	1274	95	4278
1.60		4	143	177	25	349	HOURS	0.0	7.2	373.9	46.8	2.5	430.4
1.20		119	2124	1487	140	3870	MILES	0	654	4213	6274	413	49754
0.80							NZ MANEUVER PEAKS FOR VELOCITY VS n_z BY CONFIG 10 • ALT 2000						
0.25	4	84	325	229	48	690	LESS	60	90	120	150	SUM	
-0.25	1	1	2	1	5		3.50					2	4
-0.75							3.00					9	18
SUM	4	208	2606	1997	359	5174	2.50			1	26	13	40
HOURS	0.0	2.4	30.3	14.4	1.0	48.2	2.00				49	35	8
MILES	2	215	3421	1948	176	5762	1.60		9	488	163	10	670
NZ MANEUVER PEAKS FOR VELOCITY VS n_z BY CONFIG 4 • ALT 2000							1.20						
LESS	60	90	120	150	SUM		0.80						
4.00				1	1		0.25	1	24	35	19	6	85
3.50				5	7		-0.25						
3.00				21	29		SUM	1	33	573	254	48	909
2.50			6	34	19	61	HOURS	0.0	0.4	15.6	4.9	0.2	21.0
2.00			55	131	20	208	MILES	0	34	1798	659	27	2518
1.60		15	468	650	59	1192	NZ MANEUVER PEAKS FOR VELOCITY VS n_z BY CONFIG 11 • ALT 2000						
1.20							LESS	60	90	120	150	SUM	
0.80							3.50					1	1
0.25	18	88	123	24	253		3.00					5	6
-0.25			2	2	4		2.50					8	14
-0.75							2.00					6	14
SUM	35	619	952	149	1755		1.60			14	12	1	27
HOURS	0.0	0.3	5.8	4.5	0.3	11.0	1.20		4	121	60	2	187
MILES	0	29	665	621	49	1364	0.80						
NZ MANEUVER PEAKS FOR VELOCITY VS n_z BY CONFIG 5 • ALT 2000							0.25		4	15	6	5	30
LESS	60	90	120	150	SUM		-0.25						
3.50				1	2	3	SUM		8	150	88	19	265
3.00				3	2	5	HOURS	0.0	0.1	4.4	1.7	0.0	6.2
2.50				7	4	16	MILES	0	7	522	223	8	760
2.00		5	30	41	11	87	NZ MANEUVER PEAKS FOR VELOCITY VS n_z BY CONFIG 12 • ALT 2000						
1.60		25	354	235	43	657	LESS	60	90	120	150	SUM	
1.20							3.00					2	1
0.80							2.50					4	2
0.25	11	23	94	85	13	226	2.00					9	2
-0.25				1	1	2	1.60			1	18	9	2
-0.75							1.20		10	129	37	6	182
SUM	11	53	483	373	76	996	0.80						
HOURS	0.0	0.7	7.8	4.5	0.3	13.3	0.25		13	20	13	2	48
MILES	1	56	878	614	54	1603	-0.25			1			1
NZ MANEUVER PEAKS FOR VELOCITY VS n_z BY CONFIG 6 • ALT 2000							-0.75						
LESS	60	90	120	150	SUM		SUM		24	169	65	13	271
2.50				1	1	2	HOURS	0.0	0.3	8.0	1.7	0.1	10.1
2.00				1	1	2	MILES	0	23	912	227	11	1173
1.60				66	16	150	NZ MANEUVER PEAKS FOR VELOCITY VS n_z BY CONFIG 1 • ALT 5000						
1.20				16	10	72	LESS	60	90	120	150	SUM	
0.80							3.50					1	1
0.25							3.00					3	4
-0.25							2.50					2	10
SUM	8	110	80	28	226		2.00					3	35
HOURS	0.0	1.6	15.7	1.8	0.1	19.2	1.60					23	3
MILES	0	145	1656	239	19	2059	1.20		15	182	95	10	302
NZ MANEUVER PEAKS FOR VELOCITY VS n_z BY CONFIG 7 • ALT 2000							0.80						
LESS	60	90	120	150	SUM		0.25	10	42	58	32	9	151
2.00				1	2	3	-0.25						
1.60				2	2	63	SUM	11	58	249	154	36	508
1.20							HOURS	0.0	0.5	5.5	4.4	0.1	10.5
0.80							MILES	1	41	638	619	19	1318
0.25													
-0.25													
SUM													
HOURS	0.0	0.0	1.1	0.4	0.0	1.6							
MILES	0	3	131	52	6	192							

TABLE XIX (continued)

Maneuver n_z Peaks in Coincident n_z and Airspeed Ranges by Altitude Range and Aircraft Configuration

NZ MANEUVER PEAKS FOR VELOCITY VS NZ BY CONFIG 2 , ALT 5000							NZ MANEUVER PEAKS FOR VELOCITY VS NZ BY CONFIG 7 , ALT 5000						
LESS	60	90	120	150	SUM		LESS	60	90	120	150	SUM	
4.00							3.50						
3.50				5	5		3.00				1	1	
3.00				18	23		2.50				1	1	
2.50				25	31		2.00			1	7	4	12
2.00			21	101	41	163	1.60			7	16	1	24
1.60		6	267	546	91	910	1.20		3	310	68	4	385
1.20		141	5015	3926	243	9325	0.80						
0.80							0.25		5	97	26		128
0.25	4	110	765	473	78	1430	-0.25			2			2
-0.25			1	3	1	5	-0.75						
-0.75	1					1	SUM		8	417	117	11	553
-1.25							HOURS	0.0	1.5	34.3	2.9	0.1	38.7
SUM	5	257	6069	5079	529	11939	MILES	0	144	4188	409	12	4753
HOURS	0.0	9.0	145.1	44.6	2.1	202.9	NZ MANEUVER PEAKS FOR VELOCITY VS NZ BY CONFIG 8 , ALT 5000						
MILES	1	860	17324	6638	369	25192	LESS	60	90	120	150	SUM	
NZ MANEUVER PEAKS FOR VELOCITY VS NZ BY CONFIG 3 , ALT 5000							3.00					1	1
LESS	60	90	120	150	SUM		2.50					2	2
3.50				3	7	10	1.60			4	3	1	8
3.00				11	18	29	1.20		7	86	67	1	161
2.50				3	23	34	0.80						
2.00			3	47	51	104	0.25	1	5	43	17		66
1.60				23	586	268	-0.25						
1.20						11	SUM	1	12	133	89	3	238
0.80							HOURS	0.0	1.3	15.9	4.8	0.0	22.0
0.25	1	29	120	65	13	228	MILES	0	119	1980	694	4	2797
-0.25			1			1	NZ MANEUVER PEAKS FOR VELOCITY VS NZ BY CONFIG 9 , ALT 5000						
-0.75	1	92	757	421	63	1294	LESS	60	90	120	150	SUM	
SUM							3.00					2	2
HOURS	0.0	1.9	17.0	4.4	0.1	23.4	2.50						
MILES	0	177	2021	637	24	2859	2.00						
NZ MANEUVER PEAKS FOR VELOCITY VS NZ BY CONFIG 4 , ALT 5000							1.60		1	6	10		17
LESS	60	90	120	150	SUM		1.20			193	110	2	305
4.00							0.80						
3.50				1		1	0.25	1	9	53	13	1	77
3.00				2	2	2	-0.25						
2.50			2	2	14	18	SUM	1	10	252	133	5	401
2.00				11	5	16	HOURS	0.0	0.9	61.2	19.3	0.3	81.7
1.60			9	13	5	22	MILES	0	88	7341	2648	43	10120
1.20		8	123	75	6	212	NZ MANEUVER PEAKS FOR VELOCITY VS NZ BY CONFIG 10 , ALT 5000						
0.80							LESS	60	90	120	150	SUM	
0.25		3	30	14	11	58	1.60						
-0.25							1.20			4			4
-0.75			1			1	0.80						
SUM		11	165	116	38	330	0.25			1			1
HOURS	0.0	0.2	4.3	1.3	0.1	5.8	-0.25						
MILES	0	16	533	179	13	741	SUM			5			5
NZ MANEUVER PEAKS FOR VELOCITY VS NZ BY CONFIG 5 , ALT 5000							HOURS	0.0	0.0	0.9	0.4	0.0	1.2
LESS	60	90	120	150	SUM		MILES	0	0	103	53	0	156
3.50							NZ MANEUVER PEAKS FOR VELOCITY VS NZ BY CONFIG 2 , ALT 10000						
3.00				1	4	5	LESS	60	90	120	150	SUM	
2.50				2	2	2	2.50						
2.00				3	1	5	2.00			2			2
1.60			1	3	1	5	1.60			7			12
1.20		1	71	51	10	133	1.20			163	116		279
0.80							0.80						
0.25		2	53	19	2	76	0.25		9	29	12		50
-0.25		3	125	76	17	221	-0.25			1			1
SUM							-0.75			1			1
HOURS	0.0	0.3	4.4	1.3	0.1	6.1	-1.25						
MILES	0	27	938	185	17	765	SUM		9	203	133		345
NZ MANEUVER PEAKS FOR VELOCITY VS NZ BY CONFIG 6 , ALT 5000							HOURS	0.0	0.2	9.1	1.7	0.0	11.0
LESS	60	90	120	150	SUM		MILES	0	20	1163	250	0	1433
3.50							NZ MANEUVER PEAKS FOR VELOCITY VS NZ BY CONFIG 3 , ALT 10000						
3.00				1	1	1	LESS	60	90	120	150	SUM	
2.50				2	2	3	1.60						
2.00			3	6	2	11	1.20		2	13			15
1.60			55	25	4	84	0.80						
1.20		73	1246	192	6	1517	0.25		1	2			3
0.80							-0.25						
0.25		62	271	46	9	388	SUM		3	15			18
-0.25		1	1			2	HOURS	0.0	0.1	2.7	0.2	0.0	3.0
-0.75							MILES	0	10	337	25	0	372
SUM		136	1576	270	24	2006							
HOURS	0.0	22.7	212.6	7.5	0.1	242.9							
MILES	0	2186	25143	1069	12	28410							

TABLE XIX (concluded)

Maneuver n_z Peaks in Coincident n_z and Airspeed
Ranges by Altitude Range and Aircraft Configuration

NZ MANEUVER PEAKS FOR VELOCITY VS NZ BY CONFIG 4 , ALT 10000							NZ MANEUVER PEAKS FOR VELOCITY VS NZ BY CONFIG 7 , ALT 10000						
LESS	60	90	120	150	SUM		LESS	60	90	120	150	SUM	
1.60							2.90						
1.20				1	1		2.00			1		1	
0.80							1.60					2	
0.25			1		1		1.20		22	4		26	
-0.25							0.80						
SUM			1	1	2		0.25		14	5		19	
HOURS	0.	0.	0.5	0.1	0.	0.6	-0.25					48	
MILES	0	0	61	14	0	75	SUM		38	10			
							HOURS	0.	0.2	4.7	0.3	0.	5.2
							MILES	0	23	991	46	0	660

NZ MANEUVER PEAKS FOR VELOCITY VS NZ BY CONFIG 5 , ALT 10000							NZ MANEUVER PEAKS FOR VELOCITY VS NZ BY CONFIG 8 , ALT 10000						
LESS	60	90	120	150	SUM		LESS	60	90	120	150	SUM	
1.60							1.60						
1.20			11		11		1.20			7	5	12	
0.80							0.80						
0.25			2	1	3		0.25		2	8	2	12	
-0.25							-0.25						
SUM			13	1	14		SUM		2	15	7	24	
HOURS	0.	0.0	3.0	0.1	0.	3.2	HOURS	0.	1.1	3.7	0.7	0.	5.6
MILES	0	3	382	13	0	398	MILES	0	107	471	104	0	682

NZ MANEUVER PEAKS FOR VELOCITY VS NZ BY CONFIG 6 , ALT 10000							NZ MANEUVER PEAKS FOR VELOCITY VS NZ BY CONFIG 9 , ALT 10000						
LESS	60	90	120	150	SUM		LESS	60	90	120	150	SUM	
1.60							1.60						
1.20			1	32	2	35	1.20			10		10	
0.80							0.80						
0.25				6		6	0.25			8		8	
-0.25							-0.25						
SUM			1	38	2	41	SUM			18		18	
HOURS	0.	0.4	14.1	0.4	0.	14.9	HOURS	0.	0.4	1.8	0.1	0.	2.3
MILES	0	37	1756	60	0	1853	MILES	0	42	226	8	0	276

TABLE XX

Maneuver n_z Peaks in n_z Ranges vs
Aircraft Tail Number

NZ MANEUVER PEAKS FOR TAIL NO. VS NZ SUM													
4.00	3.50	3.00	2.50	2.00	1.60	1.20	0.80	0.25	-0.25	-0.75	-1.25	LESS	SUM
996	1	12	40	54	113	488	6242	1016	5				7971
998	3	8	26	41	73	312	4572	639	5				5679
855			1	20	39	89	969	149					1267
860			5	42	103	251	3166	375	4				3946
842		4	1	3	19	103	572	329	11	6			1048
833		2	4	11	38	263	3864	747	1				4930
008		7	24	75	195	816	8207	1720	15	2			11061
009		2	12	42	154	574	4650	948	10				6392
847		7	49	96	179	771	11367	2529	11				15009
048		9	27	51	65	212	3290	635	3				4292
993		2	20	62	106	371	5677	1526	10				7774
839				1	9	39	283	64					396
989			1	16	41	135	1994	249	3				2439
973	1	11	42	94	223	1010	16356	2760	15				20512
856	1	3	15	40	115	546	5732	1096	2				7550
001			2	3	3	16	312	30	1				367
861	1	2	20	54	94	310	3936	838	2	2			5259
990				5	18	40	559	251					873
060				8	12	73	1208	412	1				1714
882			5	14	29	79	1533	289	2				1951
875			6	15	16	49	863	140					1089
SUM	7	69	300	747	1644	6547	85332	16742	101	10			111519

TABLE XXI

Maneuver n_z Peaks in n_z Ranges vs
Aircraft Tail Numbers by Mission Type

NZ MANEUVER PEAKS FOR TAIL NO. VS NZ BY MISSION COMBAT

	4.00	3.50	3.00	2.50	2.00	1.60	1.20	0.80	0.25	-0.25	-0.75	-1.25	LESS	SUM	HOURS	MILES
996	1	12	40	54	113	488	6208		1014	5				7935	93.1	11115
998	3	8	26	39	72	293	4320		568	5				5334	63.1	7659
835			1	20	39	89	969		149					1267	112.8	12913
860			5	42	101	250	3140		367	4				3909	262.0	30256
842						1	30		8					39	3.4	349
833		2	4	11	38	257	3774		687	1				4774	49.7	5776
008		7	24	69	180	779	7577		1548	15	2			10201	228.3	28394
009		2	10	42	148	557	4554		875	8				6196	123.6	13018
847		7	49	93	167	746	11245		2477	11				14795	128.3	15567
048		9	27	51	65	2.2	3290		635	3				4292	43.8	4986
993		2	20	60	102	368	5477		1460	10				7499	70.5	8235
839				1	9	39	283		64					396	35.8	4137
989			1	16	40	129	1829		211	3				2229	185.4	22193
973	1	11	42	93	216	991	15663		2605	15				19637	214.6	24907
856	1	3	15	40	115	545	5603		1066	2				7390	142.2	17197
001			2	3	3	16	312		30	1				367	34.0	4215
861	1		11	39	68	215	2537		563	1	2			3437	62.3	7446
990				5	18	40	559		251					873	8.1	986
060				8	12	73	1208		412	1				1714	85.5	9774
882			5	7	20	65	1383		243	2				1726	14.9	1730
875			5	10	9	23	366		44					457	6.4	699
SUM	7	63	287	703	1535	6177	80327		15277	87	4			104467	1965.9	233572

NZ MANEUVER PEAKS FOR TAIL NO. VS NZ BY MISSION OTHER

	4.00	3.50	3.00	2.50	2.00	1.60	1.20	0.80	0.25	-0.25	-0.75	-1.25	LESS	SUM	HOURS	MILES
996							34		2					36	0.8	102
998				2	1	19	252		71					345	3.3	383
835														0	0	0
860					2	1	26		8					37	0.5	60
842		4	1	3	19	102	542		321	11	6			1009	3.6	377
833						6	90		60					156	1.8	236
008				6	15	57	630		172					860	15.3	1801
009			2		6	17	96		73	2				196	3.4	440
847				3	12	25	122		52					214	1.6	189
048														0	0	0
993				2	4	3	200		66					275	4.2	481
839														0	0	0
989					1	6	165		38					210	1.4	161
973					7	19	693		155					875	7.4	861
856						1	129		30					160	7.9	993
001														0	0	0
861		2	9	15	26	95	1399		275	1				1822	20.0	2234
990														0	0	0
060														0	0	0
882				7	9	13	150		46					225	6.7	809
875			1	5	7	26	497		96					632	8.6	1038
SUM	6	13	44	109	370	370	5025		1465	14	6			7052	86.7	10163

TABLE XXII

Maneuver n_z Peaks Equal to or Greater Than 4.0

2053 HOURS

TAIL NO	BASE	MISSION	SEGMENT	CONF.	VALUE (G'S)	PDLL (%)	A/S (KNOTS)	ALTITUDE (FEET)	GRS WGT (LBS)
998	BIEN HOA	COMBAT	MANEUVER	2	4.6	124	175	1480	4410
998	BIEN HOA	COMBAT	MANEUVER	2	4.5	122	170	1825	4440
861	DANANG	COMBAT	MANEUVER	2	4.5	112	155	730	4085
973	DANANG	COMBAT	MANEUVER	3	4.3	109	167	1440	4145
856	DANANG	COMBAT	MANEUVER	3	4.2	104	160	3605	4055
996	BIEN HOA	COMBAT	MANEUVER	2	4.2	111	155	1460	4335
998	BIEN HOA	COMBAT	MANEUVER	2	4.0	107	155	2695	4375

TABLE XXIII

Time to Reach or Exceed n_z Levels for the 0.1 and 0.5 Probabilities with 90 Percent Confidence

n_z	Time (hr.)	
	0.1 Probability	0.5 Probability
4.0	58.6	293.2
3.5	8.26	27.0
3.0	1.84	5.48
2.5	0.735	1.83
2.0	0.335	0.742
1.6	0.0984	0.220
1.2	0.00893	0.0217

TABLE XXIV

PDLL Values in Coincident PDLL and Airspeed Ranges by Mission Type

PDLL FOR VELOCITY VS PDLL BY MISSION COMBAT							PDLL FOR VELOCITY VS PDLL BY MISSION OTHER						
	LESS	60	90	120	150	SUM		LESS	60	90	120	150	SUM
-60							-60						
-45				1		1	-45	1					1
-30	1		2			3	-30	4	1				5
-15		2	5	5		12	-15	4	1	1			6
0							0						
15							15						
30		1766	43704	32594	3404	81468	30		388	3311	1022	198	4919
45		13	1219	2616	785	4633	45		7	92	92	38	229
60			38	474	574	1086	60			6	19	42	67
75			4	85	323	412	75			2	4	15	21
90				4	73	77	90				4	6	10
105					9	9	105						
120					2	2	SUM	9	397	3412	1141	299	5258
SUM	1	1781	44972	35779	5170	87703							
HOURS	0.1	84.4	1473.6	381.6	26.0	1965.8	HOURS	0.1	6.2	57.0	22.1	1.3	86.7
MILES	6	7742	169350	52164	4294	233956	MILES	5	540	6361	3035	225	10166

TABLE XXV

PDLL Values in Coincident PDLL and Airspeed Ranges by Mission Type and Segment

PDLL FOR VELOCITY VS PDLL BY MISSION SEG. ASCENT,MIS. COMBAT							PDLL FOR VELOCITY VS PDLL BY MISSION SEG. ASCENT,MIS. OTHER						
	LESS	60	90	120	150	SUM		LESS	60	90	120	150	SUM
15							15						
30		113	1627	350	12	2102	30		118	831	61	2	1012
45		1	22	9	3	35	45			17	5	1	23
60				3	1	4	60					1	1
75							75						
90					1	1	SUM		118	848	66	4	1036
105							HOURS	0.0	2.2	14.8	1.5	0.0	18.5
SUM		114	1649	362	17	2142	MILES	0	191	1373	196	2	1962
HOURS	0.0	17.0	126.0	9.9	0.4	153.2							
MILES	0	1553	13546	1326	60	16487							

PDLL FOR VELOCITY VS PDLL BY MISSION SEG. CRUISE,MIS. COMBAT							PDLL FOR VELOCITY VS PDLL BY MISSION SEG. CRUISE,MIS. OTHER						
	LESS	60	90	120	150	SUM		LESS	60	90	120	150	SUM
15							15						
30		48	1738	802	63	2651	30		1	47	48	2	98
45			28	22		50	45						
60			1	3	4	8	SUM		1	47	48	2	98
75							HOURS	0.0	0.1	11.7	7.9	0.0	19.7
SUM		48	1767	827	67	2709	MILES	0	9	1388	1094	2	2493
HOURS	0.0	28.3	725.2	117.8	5.5	876.7							
MILES	0	2683	84781	16169	882	104315							

PDLL FOR VELOCITY VS PDLL BY MISSION SEG. MANUVR,MIS. COMBAT							PDLL FOR VELOCITY VS PDLL BY MISSION SEG. MANUVR,MIS. OTHER						
	LESS	60	90	120	150	SUM		LESS	60	90	120	150	SUM
-60							-60						
-45				1		1	-45						
-30	1		2			3	-30	1					1
-15		2	5	4		11	-15	4	1	1			6
0							0						
15							15						
30		1458	38435	29400	2822	71915	30		96	1251	596	91	2034
45		10	1147	2913	714	4384	45		4	56	69	30	159
60			33	457	551	1041	60			6	18	41	65
75			3	82	316	401	75			2	4	14	20
90				4	72	76	90				4	6	10
105					9	9	105						
120					2	2	SUM	9	102	1316	691	182	2300
SUM	1	1470	39625	32461	4286	77843	HOURS	0.1	2.0	19.6	8.3	0.8	30.7
HOURS	0.1	36.0	574.0	215.0	13.5	838.7	MILES	3	170	2239	1142	137	3691
MILES	6	3238	63584	29230	2252	100310							

PDLL FOR VELOCITY VS PDLL BY MISSION SEG. DESCNT,MIS. COMBAT							PDLL FOR VELOCITY VS PDLL BY MISSION SEG. DESCNT,MIS. OTHER						
	LESS	60	90	120	150	SUM		LESS	60	90	120	150	SUM
-30							15						
-15				1		1	30		173	1182	317	103	1775
0							45		3	19	18	7	47
15							60				1		1
30		147	1904	2042	707	4800	75					1	1
45		2	22	72	68	164	90						
60			4	11	18	33	SUM		176	1201	336	111	1824
75			1	3	7	11	HOURS	0.0	2.0	10.9	4.4	0.5	17.9
90							MILES	1	170	1161	603	85	2020
SUM		149	1931	2129	800	5009							
HOURS	0.0	3.1	48.5	39.0	6.6	97.2							
MILES	0	266	5449	5440	1101	12256							

TABLE XXVI

PDLL Values in Coincident PDLL and Airspeed Ranges
by Altitude Range and Aircraft Configuration

PDLL FOR VELOCITY VS PDLL BY CONFIGURATION 1 ALT. LESS							PDLL FOR VELOCITY VS PDLL BY CONFIGURATION 7 ALT. LESS						
LESS	60	90	120	150	SUM		LESS	60	90	120	150	SUM	
15							15						
30	232	1398	208	25	1863		30	2	15	2	1	20	
45	3	37	14	1	55		45						
60			3	1	4		SUM	2	15	2	1	20	
75				1	1		HOURS	0.0	0.1	0.5	0.0	0.0	0.6
90							MILES	0	7	47	3	1	58
SUM	235	1435	229	28	1923								
HOURS	0.0	2.8	11.8	1.2	0.1	15.9	PDLL FOR VELOCITY VS PDLL BY CONFIGURATION 8 ALT. LESS						
MILES	2	230	1219	158	19	1628	LESS	60	90	120	150	SUM	
PDLL FOR VELOCITY VS PDLL BY CONFIGURATION 2 ALT. LESS							15						
LESS	60	90	120	150	SUM		30	4	32	9		45	
-30							45		1	1		2	
-15				1	1		SUM	4	33	10		47	
0							HOURS	0.0	0.1	0.6	0.1	0.0	0.8
15							MILES	0	8	63	12	0	83
30	167	1498	1015	162	2842		PDLL FOR VELOCITY VS PDLL BY CONFIGURATION 9 ALT. LESS						
45	1	34	110	25	170		LESS	60	90	120	150	SUM	
60			9	18	27		15						
75			4	10	14		30	10	143	321	9	491	
90			1	2	3		45		1	19	1	21	
105				2	2		60				1	1	
120							75						
SUM	168	1532	1140	219	3059		SUM	18	144	340	11	513	
HOURS	0.0	3.2	17.5	11.6	2.9	35.1	HOURS	0.0	1.6	6.9	1.7	0.0	10.2
MILES	0	270	1829	1608	451	4158	MILES	0	134	700	226	8	1068
PDLL FOR VELOCITY VS PDLL BY CONFIGURATION 3 ALT. LESS							PDLL FOR VELOCITY VS PDLL BY CONFIGURATION 10 ALT. LESS						
LESS	60	90	120	150	SUM		LESS	60	90	120	150	SUM	
15							15						
30	25	231	70	10	336		30		17	2		19	
45		1	4	2	7		45						
60			1	3	4		SUM		17	2		19	
75			1	3	4		HOURS	0.0	0.1	0.7	0.0	0.0	0.8
90				2	2		MILES	0	6	74	6	0	86
105							PDLL FOR VELOCITY VS PDLL BY CONFIGURATION 11 ALT. LESS						
SUM	25	232	74	20	353		LESS	60	90	120	150	SUM	
HOURS	0.0	0.4	2.3	0.6	0.2	3.3	15						
MILES	0	30	235	75	27	367	30	1	20	1		22	
PDLL FOR VELOCITY VS PDLL BY CONFIGURATION 4 ALT. LESS							45						
LESS	60	90	120	150	SUM		SUM	1	20	1		22	
15							HOURS	0.0	0.0	0.5	0.0	0.0	0.5
30	3	83	43	10	139		MILES	0	3	50	1	0	54
45			1	2	3		PDLL FOR VELOCITY VS PDLL BY CONFIGURATION 12 ALT. LESS						
60							LESS	60	90	120	150	SUM	
75							15						
90				2	2		30		1	20	1		22
SUM	3	83	44	14	144		45						
HOURS	0.0	0.0	0.5	0.4	0.1	1.1	SUM		1	20	1		22
MILES	0	4	57	58	19	138	HOURS	0.0	0.2	1.6	0.0	0.0	1.8
PDLL FOR VELOCITY VS PDLL BY CONFIGURATION 5 ALT. LESS							MILES	0	18	164	5	2	189
LESS	60	90	120	150	SUM		PDLL FOR VELOCITY VS PDLL BY CONFIGURATION 1 ALT. 1000						
15							LESS	60	90	120	150	SUM	
30	42	326	37	9	414		15						
45		3	9		12		30	2	72	4		78	
60				1	1		45						
75				2	3		SUM	2	72	4		78	
90							HOURS	0.0	0.2	1.6	0.0	0.0	1.8
SUM	42	329	47	12	430		MILES	0	18	164	5	2	189
HOURS	0.0	0.4	2.8	0.3	0.0	3.6	PDLL FOR VELOCITY VS PDLL BY CONFIGURATION 6 ALT. LESS						
MILES	0	35	290	43	4	372	LESS	60	90	120	150	SUM	
PDLL FOR VELOCITY VS PDLL BY CONFIGURATION 6 ALT. LESS							15						
LESS	60	90	120	150	SUM		30	40	1051	454	94	1639	
15							45		21	22	13	56	
30	3	97	7		107		60		2	1	4	7	
45		2	3		5		75				4	4	
60							90						
SUM	3	99	10		112		SUM	40	1074	477	115	1706	
HOURS	0.0	0.5	4.4	0.1	0.0	5.0	HOURS	0.0	0.9	16.9	5.3	0.5	23.6
MILES	0	44	443	18	0	505	MILES	0	78	1834	727	75	2714

TABLE XXVI (continued)

PDLL Values in Coincident PDLL and Airspeed Ranges
by Altitude Range and Aircraft Configuration

PDLL FOR VELOCITY VS PDLL BY CONFIGURATION 2 ,ALT. 1000							PDLL FOR VELOCITY VS PDLL BY CONFIGURATION 8 ,ALT. 1000						
	LESS	60	90	120	150	SUM		LESS	60	90	120	150	SUM
-60							15						
-45				1		1	30		2	12	11	1	26
-30							45			1			2
-15			1			1	60						
0							SUM		2	13	11	2	28
15							HOURS	0.	0.2	0.5	0.4	0.0	1.1
30		459	9034	6619	729	16841	MILES	0	19	56	51	4	130
45		2	204	458	123	787							
60			10	62	89	161							
75			2	15	62	79							
90				1	10	11							
105					2	2							
120					2	2							
SUM		461	9251	7156	1017	17885							
HOURS	0.0	9.1	105.8	44.6	5.3	164.8							
MILES	1	781	11595	5982	847	19206							
PDLL FOR VELOCITY VS PDLL BY CONFIGURATION 3 ,ALT. 1000							PDLL FOR VELOCITY VS PDLL BY CONFIGURATION 9 ,ALT. 1000						
	LESS	60	90	120	150	SUM		LESS	60	90	120	150	SUM
15							15						
30		19	661	575	69	1324	30		3	155	97	8	263
45		1	37	73	24	135	45				17	4	21
60			1	30	50	81	60				9	5	14
75				7	31	38	75				1	5	6
90					10	10	90					1	1
105					1	1	105						
120							SUM		3	155	124	23	305
SUM		20	699	685	185	1589	HOURS	0.	0.8	11.5	1.9	0.2	14.4
HOURS	0.0	0.3	6.4	4.2	0.3	11.6	MILES	0	67	1238	255	34	1594
MILES	0	41	706	366	79	1392							
PDLL FOR VELOCITY VS PDLL BY CONFIGURATION 4 ,ALT. 1000							PDLL FOR VELOCITY VS PDLL BY CONFIGURATION 10 ,ALT. 1000						
	LESS	60	90	120	150	SUM		LESS	60	90	120	150	SUM
-30							15						
-15			1			1	30			14	23	4	41
0							45				14	9	23
15							60				8	8	16
30		1	193	927	270	1391	75					2	2
45			10	100	39	149	90				14	43	57
60			1	26	20	47	105					23	82
75				5	11	16	SUM						
90					1	1	HOURS	0.	0.	0.7	0.3	0.1	1.0
105							MILES	0	0	75	39	9	123
SUM		1	205	1058	341	1405							
HOURS	0.	0.0	1.8	3.0	0.5	5.4							
MILES	0	2	206	414	87	709							
PDLL FOR VELOCITY VS PDLL BY CONFIGURATION 5 ,ALT. 1000							PDLL FOR VELOCITY VS PDLL BY CONFIGURATION 11 ,ALT. 1000						
	LESS	60	90	120	150	SUM		LESS	60	90	120	150	SUM
15							15						
30		4	170	141	11	326	30			15	6	3	24
45			2	5	5	12	45				7	14	21
60				3	7	10	60				1	7	8
75				1	4	5	75						
90					1	1	90					1	1
105							105				15	14	29
SUM		4	172	150	28	354	SUM					25	54
HOURS	0.0	0.1	2.4	1.8	0.1	4.3	HOURS	0.	0.0	0.5	0.2	0.1	0.7
MILES	0	9	260	238	12	519	MILES	0	2	52	24	9	87
PDLL FOR VELOCITY VS PDLL BY CONFIGURATION 6 ,ALT. 1000							PDLL FOR VELOCITY VS PDLL BY CONFIGURATION 12 ,ALT. 1000						
	LESS	60	90	120	150	SUM		LESS	60	90	120	150	SUM
15							15						
30				33	17	60	30			13	15	9	37
45							45				3	4	7
60							60					2	2
75							75					2	2
90							90						
105							SUM				13	18	48
SUM							HOURS	0.	0.0	0.8	0.3	0.1	1.2
HOURS	0.0	0.4	5.0	0.4	0.1	5.9	MILES	0	3	86	39	15	143
MILES	0	38	517	50	9	614							
PDLL FOR VELOCITY VS PDLL BY CONFIGURATION 7 ,ALT. 1000							PDLL FOR VELOCITY VS PDLL BY CONFIGURATION 1 ,ALT. 2000						
	LESS	60	90	120	150	SUM		LESS	60	90	120	150	SUM
15							-60						
30							-45						
45							-30						
60							-15						
75							0						
90							15						
105							30			49	985	714	149
SUM							45		2	17	34	27	80
HOURS	0.	0.0	0.5	0.1	0.0	0.7	60			4	9	14	29
MILES	0	2	54	17	4	77	75			2	1	3	3
							90				3		3
							105						
							SUM		9	53	1009	761	192
							HOURS	0.0	1.5	27.4	15.6	1.2	45.7
							MILES	1	127	3118	2145	199	5590

TABLE XXVI (continued)

PDLL Values in Coincident PDLL and Airspeed Ranges
by Altitude Range and Aircraft Configuration

PDLL FOR VELOCITY VS PDLL BY CONFIGURATION 2 ,ALT. 2000							PDLL FOR VELOCITY VS PDLL BY CONFIGURATION 8 ,ALT. 2000							
	LESS	60	90	120	150	SUM		LESS	60	90	120	150	SUM	
-30							15							
-15		2	2			4	30			7	24	11	42	
0							45				1		1	
15							60							
30		576	16400	13302	1358	31636	SUM			7	25	11	43	
45		1	406	865	318	1590	HOURS	0.0	0.1	0.8	0.7	0.1	1.7	
60			12	133	154	299	MILES	0	5	99	101	9	208	
75			2	20	85	107								
90					20	20								
105					4	4								
120														
SUM		576	16822	14920	1939	33660								
HOURS	0.0	14.1	295.7	131.6	7.9	449.4	PDLL FOR VELOCITY VS PDLL BY CONFIGURATION 9 ,ALT. 2000							
MILES	1	1293	33404	17822	1323	93803		LESS	60	90	120	150	SUM	
PDLL FOR VELOCITY VS PDLL BY CONFIGURATION 3 ,ALT. 2000							-30							
	LESS	60	90	120	150	SUM	-15				1		1	
-30							0							
-15				1		1	15							
0							30		44	2501	1055	38	3638	
15							45		2	87	106	18	213	
30		118	2087	1420	146	3771	60			3	27	17	47	
45		1	71	130	41	243	75				2	7	9	
60			3	45	82	110	90			46	2591	1191	80	3908
75				4	34	38	HOURS	0.0	7.2	373.9	46.8	2.5	430.4	
90					18	18	MILES	0	634	42413	6274	413	49754	
105														
SUM		119	2161	1600	301	4181	PDLL FOR VELOCITY VS PDLL BY CONFIGURATION 10 ,ALT. 2000							
HOURS	0.0	2.4	30.3	14.4	1.0	48.2		LESS	60	90	120	150	SUM	
MILES	2	213	3421	1948	176	5782	15							
PDLL FOR VELOCITY VS PDLL BY CONFIGURATION 4 ,ALT. 2000							30		9	507	172	10	698	
	LESS	60	90	120	150	SUM	45			30	41	15	86	
15							60				18	14	32	
30		12	445	694	65	1216	75				3	3	6	
45			24	84	23	133	90				1		1	
60				19	23	44	105							
75				1	7	8	SUM		9	537	235	42	823	
90							HOURS	0.0	0.4	15.6	4.9	0.2	21.0	
SUM		12	469	798	122	1401	MILES	0	34	1798	659	27	2513	
HOURS	0.0	0.3	5.8	4.5	0.3	11.0	PDLL FOR VELOCITY VS PDLL BY CONFIGURATION 11 ,ALT. 2000							
MILES	0	29	665	621	49	1364		LESS	60	90	120	150	SUM	
PDLL FOR VELOCITY VS PDLL BY CONFIGURATION 5 ,ALT. 2000							15							
	LESS	60	90	120	150	SUM	30		4	128	64	2	198	
-30							45			7	12	4	23	
-15				1		1	60				2	8	10	
0							75				2		2	
15							90							
30		29	301	226	37	593	SUM		4	135	80	14	233	
45		1	17	19	4	41	HOURS	0.0	0.1	4.4	1.7	0.0	6.2	
60				4	4	8	MILES	0	7	522	223	8	760	
75					2	2								
90							PDLL FOR VELOCITY VS PDLL BY CONFIGURATION 12 ,ALT. 2000							
SUM		30	318	250	47	645		LESS	60	90	120	150	SUM	
HOURS	0.0	0.7	7.8	4.5	0.3	13.3	15							
MILES	1	56	878	614	54	1603	30		10	134	38	7	189	
PDLL FOR VELOCITY VS PDLL BY CONFIGURATION 6 ,ALT. 2000							45		1	12	9	3	25	
	LESS	60	90	120	150	SUM	60				3	1	4	
15							75				1		1	
30							90							
45			68	66	16	150	SUM		11	146	51	11	219	
60			1		1	2	HOURS	0.0	0.3	8.0	1.7	0.1	10.1	
75				1	1	2	MILES	0	23	912	227	11	1173	
90														
SUM			69	67	18	154	PDLL FOR VELOCITY VS PDLL BY CONFIGURATION 1 ,ALT. 5000							
HOURS	0.0	1.6	15.7	1.8	0.1	19.2		LESS	60	90	120	150	SUM	
MILES	0	145	1656	239	19	2059	15							
PDLL FOR VELOCITY VS PDLL BY CONFIGURATION 7 ,ALT. 2000							30		16	154	94	12	276	
	LESS	60	90	120	150	SUM	45			2	15	8	25	
15							60				2	6	8	
30							75				1	1	2	
45			23	35	4	62	90							
60							SUM		16	156	112	27	311	
75			23	35	4	62	HOURS	0.0	0.5	5.5	4.4	0.1	10.5	
90							MILES	1	41	638	619	19	1318	
SUM														
HOURS	0.0	0.0	1.1	0.4	0.0	1.6								
MILES	0	3	131	52	6	192								

TABLE XXVI (continued)

PDLL Values in Coincident PDLL and Airspeed Ranges
by Altitude Range and Aircraft Configuration

PDLL FOR VELOCITY VS PDLL BY CONFIGURATION 2 ,ALT. 5000							PDLL FOR VELOCITY VS PDLL BY CONFIGURATION 8 ,ALT. 5000						
LESS	60	90	120	150	SUM		LESS	60	90	120	150	SUM	
-45							15						
-30	1				1		30		7	67		161	
-15				1	1		45		2	4	1	7	
0							60				1	1	
15							75						
30		143	5111	4108	272	9634	SUM		7	89	71	2	169
45		4	176	422	73	677	HOURS	0.0	1.3	13.9	4.8	0.0	22.0
60			5	50	54	109	MILES	0	119	1980	604	4	2797
75				13	37	50							
90					11	11							
105													
SUM	1	147	5292	4594	449	10483							
HOURS	0.0	9.0	148.1	46.8	2.1	202.9	PDLL FOR VELOCITY VS PDLL BY CONFIGURATION 9 ,ALT. 5000						
MILES	1	860	17324	6638	369	25192	LESS	60	90	120	150	SUM	
PDLL FOR VELOCITY VS PDLL BY CONFIGURATION 3 ,ALT. 5000							15						
LESS	60	90	120	150	SUM		30						
15							45		1	192	112	1	305
30		25	596	285	12	916	60			6	8	1	16
45			32	47	7	86	75					1	1
60			1	17	14	32	90					1	1
75				5	14	19	SUM		1	198	120	4	323
90				1	2	3	HOURS	0.0	0.9	61.2	19.3	0.3	81.7
105							MILES	0	88	7341	2648	43	10120
SUM	23	629	335	49	1056								
HOURS	0.0	1.9	17.0	4.4	0.1	23.4	PDLL FOR VELOCITY VS PDLL BY CONFIGURATION 10 ,ALT. 5000						
MILES	0	177	2021	637	24	2859	LESS	60	90	120	150	SUM	
PDLL FOR VELOCITY VS PDLL BY CONFIGURATION 4 ,ALT. 5000							15						
LESS	60	90	120	150	SUM		30			4		4	
-45							45						
-30							SUM			4		4	
-15							HOURS	0.0	0.0	0.9	0.4	0.0	1.2
0							MILES	0	0	103	53	0	156
15													
30		8	111	79	5	203	PDLL FOR VELOCITY VS PDLL BY CONFIGURATION 2 ,ALT. 10000						
45			5	13	2	20	LESS	60	90	120	150	SUM	
60			2	4	14	20	-45						
75					5	5	-30						
90				1		1	-15						
105							0						
SUM	8	119	97	26	250		15						
HOURS	0.0	0.2	4.3	1.3	0.1	5.8	30			144	117		281
MILES	0	14	533	179	13	741	45			7	1		8
PDLL FOR VELOCITY VS PDLL BY CONFIGURATION 5 ,ALT. 5000							60						
LESS	60	90	120	150	SUM		SUM			172	118		290
15							HOURS	0.0	0.2	9.1	1.7	0.0	11.0
30			53	51	9	113	MILES	0	20	1163	250	0	1433
45			1	1	2	4							
60				2	4	6	PDLL FOR VELOCITY VS PDLL BY CONFIGURATION 3 ,ALT. 10000						
75							LESS	60	90	120	150	SUM	
90			54	54	13	121	15						
105							30			2	13		15
SUM							45			2	13		15
HOURS	0.0	0.3	4.4	1.3	0.1	6.1	SUM			2	13		15
MILES	0	27	538	185	15	765	HOURS	0.0	0.1	2.7	0.2	0.0	3.0
PDLL FOR VELOCITY VS PDLL BY CONFIGURATION 6 ,ALT. 5000							MILES	0	10	337	25	0	372
LESS	60	90	120	150	SUM		PDLL FOR VELOCITY VS PDLL BY CONFIGURATION 4 ,ALT. 10000						
15							LESS	60	90	120	150	SUM	
30							15						
45							30						
60							45						
75							SUM						
90							HOURS	0.0	0.1	2.7	0.2	0.0	3.0
105							MILES	0	10	337	25	0	372
SUM	73	1255	197	8	1533		PDLL FOR VELOCITY VS PDLL BY CONFIGURATION 5 ,ALT. 10000						
HOURS	0.0	22.7	21.1	7.5	0.1	242.9	LESS	60	90	120	150	SUM	
MILES	0	2186	25143	1069	12	28410	15						
PDLL FOR VELOCITY VS PDLL BY CONFIGURATION 7 ,ALT. 5000							30			1		1	
LESS	60	90	120	150	SUM		45						
-30							SUM			1		1	
-15							HOURS	0.0	0.0	0.5	0.1	0.0	0.6
0							MILES	0	0	61	14	0	75
15							PDLL FOR VELOCITY VS PDLL BY CONFIGURATION 6 ,ALT. 10000						
30							LESS	60	90	120	150	SUM	
45							15						
60							30						
75							45						
90							SUM						
105							HOURS	0.0	0.0	3.0	0.1	0.0	3.2
SUM	3	314	78	5	400		MILES	0	3	382	13	0	398
HOURS	0.0	1.5	34.3	2.9	0.1	38.7							
MILES	0	144	4188	409	12	4753							

TABLE XXVI (concluded)

PDLL Values in Coincident PDLL and Airspeed Ranges
by Altitude Range and Aircraft Configuration

PDLL FOR VELOCITY VS PDLL BY CONFIGURATION							4	ALT.	10000	PDLL FOR VELOCITY VS PDLL BY CONFIGURATION							8	ALT.	10000
LESS	60	90	120	150	SUM					LESS	60	90	120	150	SUM				
15										15									
30		1	32	2		35				30			7	5		12			
45										45									
SUM		1	32	2		35				SUM			7	5		12			
HOURS	0.	0.4	14.1	0.4	0.	14.9				HOURS	0.	1.1	3.7	0.7	0.	5.6			
MILES	0	37	1756	60	0	1853				MILES	0	107	471	104	0	682			

PDLL FOR VELOCITY VS PDLL BY CONFIGURATION							7	ALT.	10000	PDLL FOR VELOCITY VS PDLL BY CONFIGURATION							9	ALT.	10000
LESS	60	90	120	150	SUM					LESS	60	90	120	150	SUM				
15										15									
30			23	4		27				30			10			10			
45			1	1		2				45									
60										SUM			10			10			
SUM			24	5		29				HOURS	0.	0.4	1.8	0.1	0.	2.3			
HOURS	0.	0.2	4.7	0.3	0.	5.2				MILES	0	42	226	7	0	276			
MILES	0	23	591	46	0	660													

TABLE XXVII

Gust n_z Peaks in Coincident n_z and Airspeed Ranges

NZ GUST PEAKS FOR VELOCITY VS NZ BY ALT						SUM
LESS	60	90	120	150	SUM	
2.50						
2.00			1	1		2
1.60		7	39	20		66
1.20	332	7556	7473	1719		17080
0.80						
0.75	226	4860	4748	1079		10913
-0.25		1	8	1		10
-0.75						
SUM	558	12424	12269	2820		28071
HOURS	0.2	90.7	1530.7	403.7	27.4	2052.6
MILES	11	8282	175725	55201	4519	243738

TABLE XXVIII

Gust n_z Peaks in Coincident n_z and Airspeed Ranges
by Gross Weight and Altitude Ranges

NZ GUST PEAKS FOR VELOCITY V ⁴ NZ BY ALT							LESS, WGT	LESS	NZ GUST PEAKS FOR VELOCITY VS NZ BY ALT							LESS, WGT	3750
LESS	60	90	120	150	SUM				LESS	60	90	120	150	SUM			
1.60									2.00								
1.20			1		1				1.60			2		2			
0.80									1.20	50	149	29	13	261			
SUM			1		1				0.80								
HOURS	0.	0.0	0.0	0.	0.	0.0			0.25	25	163	22	14	224			
MILES	0	1	4	0	0	5			-0.25		1			1			
									SUM	75	333	53	27	468			
NZ GUST PEAKS FOR VELOCITY VS NZ BY ALT							1000, WGT	LESS	NZ GUST PEAKS FOR VELOCITY VS NZ BY ALT							1000, WGT	3750
LESS	60	90	120	150	SUM				LESS	60	90	120	150	SUM			
1.60									1.60								
1.20					2	2			1.20	11	144	116	28	299			
0.80									0.80								
0.25					4	4			0.25	7	128	113	21	269			
-0.25									-0.25								
SUM					6	6			SUM	1	272	229	49	568			
HOURS	0.	0.	0.0	0.0	0.0	0.1			HOURS	0.	0.2	0.6	4.0	0.7	11.6		
MILES	0	0	3	2	3	8			MILES	0	20	729	545	119	1413		
NZ GUST PEAKS FOR VELOCITY VS NZ BY ALT							2000, WGT	LESS	NZ GUST PEAKS FOR VELOCITY VS NZ BY ALT							2000, WGT	3750
LESS	60	90	120	150	SUM				LESS	60	90	120	150	SUM			
1.60									2.00								
1.20					2	4	6		1.60			2		2			
0.80									1.20	3	284	126	12	425			
0.25					2	6	8		0.80								
-0.25									0.25	3	262	113	13	391			
SUM					4	10	14		-0.25								
HOURS	0.	0.0	0.1	0.5	0.1	0.7			SUM	6	548	239	25	818			
MILES	0	2	14	70	15	101			HOURS	0.0	0.8	16.7	10.8	0.1			
									MILES	0	71	1916	1467	134			
NZ GUST PEAKS FOR VELOCITY VS NZ BY ALT							LESS, WGT	3500	NZ GUST PEAKS FOR VELOCITY VS NZ BY ALT							5000, WGT	3750
LESS	60	90	120	150	SUM				LESS	60	90	120	150	SUM			
1.60									1.60								
1.20						4			1.20			21	12	33			
0.80									0.80								
0.25						2			0.25	1	13	9		23			
-0.25									-0.25								
SUM						6			SUM	1	34	21		56			
HOURS	0.	0.0	0.1	0.0	0.	0.1			HOURS	0.0	0.0	3.3	2.8	0.1	6.3		
MILES	0	4	9	1	1	14			MILES	0	4	405	397	22	828		
NZ GUST PEAKS FOR VELOCITY VS NZ BY ALT							1000, WGT	3500	NZ GUST PEAKS FOR VELOCITY VS NZ BY ALT							LESS, WGT	4000
LESS	60	90	120	150	SUM				LESS	60	90	120	150	SUM			
1.60									2.00								
1.20						5			1.60			1		1			
0.80									1.20	34	379	67	27	527			
0.25						4			0.80								
-0.25									0.25	21	268	73	23	385			
SUM						9			-0.25								
HOURS	0.	0.0	0.2	0.2	0.0	0.4			SUM	55	648	160	50	913			
MILES	0	0	24	23	0	47			HOURS	0.0	2.3	13.1	2.6	0.3	18.4		
									MILES	1	195	1370	353	54	1973		
NZ GUST PEAKS FOR VELOCITY VS NZ BY ALT							2000, WGT	3500	NZ GUST PEAKS FOR VELOCITY VS NZ BY ALT							1000, WGT	4000
LESS	60	90	120	150	SUM				LESS	60	90	120	150	SUM			
1.60									2.50								
1.20						5	9	10	2.00					1	1		
0.80									1.60			2	7		9		
0.25						6	6	10	1.20	15	378	946	262	1601			
-0.25									0.80								
SUM						11	15	20	0.25	15	222	541	142	920			
HOURS	0.	0.0	0.7	0.6	0.2	1.4			-0.25								
MILES	0	2	76	77	27	182			SUM	30	602	1494	405	2531			
NZ GUST PEAKS FOR VELOCITY VS NZ BY ALT							5000, WGT	3500	NZ GUST PEAKS FOR VELOCITY VS NZ BY ALT							1000, WGT	4000
LESS	60	90	120	150	SUM				LESS	60	90	120	150	SUM			
1.60									2.50								
1.20						1	6	3	10								
0.80									2.00								
0.25						1	3	3	7								
-0.25									1.60								
SUM						2	9	6	17								
HOURS	0.	0.0	0.3	0.2	0.	0.5			1.20								
MILES	0	1	33	29	0	63			0.80								

TABLE XXVIII (continued)

Gust n_z Peaks in Coincident n_z and Airspeed Ranges
by Gross Weight and Altitude Ranges

NZ GUST PEAKS FOR VELOCITY VS NZ BY ALT 2000, WGT 4000							NZ GUST PEAKS FOR VELOCITY VS NZ BY ALT 10000, WGT 4250							
	LESS	60	90	120	150	SUM		LESS	60	90	120	150	SUM	
2.00							1.60							
1.60				1		1	1.20			60	23		83	
1.20				7	1	8	0.80							
0.80		20	348	748	136	1452	0.25			22			22	
0.25		19	389	473	98	979	-0.25							
-0.25				2		2	SUM			82	23		105	
-0.75							HOURS	0.0	0.4	17.3	1.7	0.0	19.4	
SUM		39	937	1231	235	2442	MILES	0	38	2184	251	0	2473	
HOURS 0.0 5.0 119.3 62.9 3.9 187.2							NZ GUST PEAKS FOR VELOCITY VS NZ BY ALT LESS, WGT 4500							
MILES 3 443 13192 8591 661 22850								LESS	60	90	120	150	SUM	
NZ GUST PEAKS FOR VELOCITY VS NZ BY ALT 3000, WGT 4000							1.60							
	LESS	60	90	120	150	SUM	1.20		30	201	342	86	659	
1.60							0.80							
1.20		7	285	188	6	486	0.25		16	110	219	60	405	
0.80							-0.25							
0.25		2	194	141	7	344	SUM		46	311	561	146	1064	
-0.25							HOURS	0.0	1.9	9.4	5.8	1.3	18.4	
SUM		9	479	329	13	830	MILES	0	159	966	819	211	2154	
HOURS 0.0 4.1 63.7 31.7 0.7 100.2							NZ GUST PEAKS FOR VELOCITY VS NZ BY ALT 1000, WGT 4500							
MILES 1 391 7806 4496 130 12824								LESS	60	90	120	150	SUM	
NZ GUST PEAKS FOR VELOCITY VS NZ BY ALT 10000, WGT 4000							2.00							
	LESS	60	90	120	150	SUM	1.60							
1.60							1.20		8	298	396	214	916	
1.20			19	2		21	0.80							
0.80							0.25		3	169	275	111	558	
0.25		1	21	2		24	-0.25							
-0.25							SUM		11	467	674	331	1483	
SUM		1	40	4		45	HOURS	0.0	4.3	39.8	10.7	1.4	56.2	
HOURS	0.0	1.4	11.3	1.2	0.0	13.8	MILES	1	367	4306	1442	222	6338	
MILES	0	133	1428	173	0	1734	NZ GUST PEAKS FOR VELOCITY VS NZ BY ALT 2000, WGT 4500							
NZ GUST PEAKS FOR VELOCITY VS NZ BY ALT LESS, WGT 4250								LESS	60	90	120	150	SUM	
	LESS	60	90	120	150	SUM	2.00							
2.00							1.60							
1.60					2	2	1.20		13	748	989	111	1861	
1.20		30	252	213	147	642	0.80		13	386	507	84	990	
0.80							0.25				3	1	4	
0.25		11	116	215	133	475	-0.25							
-0.25							SUM		26	1134	1505	199	2864	
SUM		41	368	428	282	1119	HOURS	0.0	7.2	294.7	45.9	3.3	351.1	
HOURS	0.0	2.7	15.8	6.2	1.2	25.9	MILES	0	644	33282	6181	559	40662	
MILES	0	227	1650	838	188	2903	NZ GUST PEAKS FOR VELOCITY VS NZ BY ALT 5000, WGT 4500							
NZ GUST PEAKS FOR VELOCITY VS NZ BY ALT 1000, WGT 4250								LESS	60	90	120	150	SUM	
	LESS	60	90	120	150	SUM	2.00							
2.00							1.60							
1.60				2	1	3	1.20		18	407	209	14	648	
1.20		5	504	685	257	1451	0.80							
0.80							0.25		17	279	124	11	431	
0.25		1	323	433	121	878	-0.25							
-0.25				3		3	SUM		35	687	333	25	1080	
-0.75							HOURS	0.0	15.7	215.0	18.4	0.5	249.6	
SUM		6	827	1123	379	2335	MILES	0	1316	25497	2576	86	29675	
HOURS	0.0	4.1	61.3	24.3	2.7	92.4	NZ GUST PEAKS FOR VELOCITY VS NZ BY ALT 10000, WGT 4500							
MILES	0	357	6745	3230	434	10766		LESS	60	90	120	150	SUM	
NZ GUST PEAKS FOR VELOCITY VS NZ BY ALT 2000, WGT 4250							1.60							
	LESS	60	90	120	150	SUM	1.20			11	4		15	
2.00							0.80							
1.60				7	6	13	0.25			11	1		12	
1.20		36	1574	1740	338	3688	-0.25							
0.80							SUM			22	5		27	
0.25		37	948	1124	182	2291	HOURS	0.0	0.5	9.0	0.3	0.0	9.9	
-0.25							MILES	0	54	1116	50	0	1220	
SUM		73	2522	2871	526	3992	NZ GUST PEAKS FOR VELOCITY VS NZ BY ALT LESS, WGT 4750							
HOURS	0.0	11.3	284.5	103.8	4.9	404.5		LESS	60	90	120	150	SUM	
MILES	2	994	32358	14022	815	48191	1.60							
NZ GUST PEAKS FOR VELOCITY VS NZ BY ALT 5000, WGT 4250							1.20			20	97	25	5	147
	LESS	60	90	120	150	SUM	0.80							
2.00							0.25			9	75	16	3	103
1.60							-0.25							
1.20		20	937	543	37	1537	SUM			29	172	41	8	250
0.80							HOURS	0.0	2.0	9.2	0.8	0.3	12.3	
0.25		17	551	314	26	948	MILES	0	168	925	113	53	1259	
-0.25														
SUM		37	1529	862	64	2492								
HOURS	0.0	11.4	173.3	39.0	1.5	225.2								
MILES	1	1090	20890	5516	273	27770								

TABLE XXVIII (concluded)

Gust n_z Peaks in Coincident n_z and Airspeed Ranges
by Gross Weight and Altitude Ranges

NZ GUST PEAKS FOR VELOCITY VS NZ BY ALT							1000, WGT	4750	NZ GUST PEAKS FOR VELOCITY VS NZ BY ALT							5000, WGT	4750
LESS	60	90	120	150	SUM				LESS	60	90	120	150	SUM			
1.60									1.60								
1.20			55	14	4	73			1.20		10	69	1		80		
0.80									0.80								
0.25			30	9	2	41			0.25		7	76	1		84		
-0.25									-0.25								
SUM			85	23	6	114			SUM		17	145	2		164		
HOURS	0.0	1.0	13.0	0.5	0.1	14.5			HOURS	0.0	6.9	46.1	0.9	0.0	53.9		
MILES	0	90	1371	60	8	1329			MILES	0	656	5247	128	0	6031		
NZ GUST PEAKS FOR VELOCITY VS NZ BY ALT							2000, WGT	4750	NZ GUST PEAKS FOR VELOCITY VS NZ BY ALT							10000, WGT	4750
LESS	60	90	120	150	SUM				LESS	60	90	120	150	SUM			
1.60									0.80								
1.20		1	95	21	6	123			0.25			1			1		
0.80									-0.25						1		
0.25			48	12	8	68			SUM								
-0.25									HOURS	0.0	0.2	0.7	0.0	0.0	0.8		
SUM		1	143	33	14	191			MILES	0	17	78	0	0	95		
HOURS	0.0	4.4	74.6	4.2	0.5	83.7											
MILES	0	396	8174	559	89	9214											

TABLE XXIX

U_{de} Values in Coincident U_{de} and Altitude Ranges

GUST U_{de} PEAKS FOR ALTITUDE VS U_{de}							
	LESS	1000	2000	5000	10000	15000	SUM
25							
20	2	2	3	1			8
15	16	20	20	6			62
10	214	210	399	172	1		996
5	3137	5247	10278	4313	202		23197
-5							
-10	2560	3625	7449	3285	120		17039
-15	198	135	232	120	1		646
-20	14	10	13	2			39
-25	2	1	4				7
-30							
SUM	6123	9250	18398	7899	324		41994
HOURS	78.8	234.7	1057.7	635.7	45.7	0.0	2052.6
MILES	8705	27307	124784	77188	5749	0	243733

TABLE XXX

$\Delta n_z/\bar{A}$ Values in Coincident $\Delta n_z/\bar{A}$ and Altitude Ranges

ALTITUDE VS DELTA n_z GUST OVER \bar{A}							
	LESS	1000	2000	5000	10000	15000	SUM
40		3	9	5			17
35	1	13	21	7			42
30	1	32	76	37	1		147
25	9	87	261	169	6		532
20	38	288	857	522	19		1724
15	224	1352	3851	2070	103		7600
10	1296	5573	10951	3798	160		21778
5	3716	2725	2856	347	11		9655
-5							
-10	3993	3758	4799	753	33		13336
-15	851	4424	10163	4056	191		19685
-20	144	809	2476	1504	57		4990
-25	29	209	569	374	15		1196
-30	6	54	148	123	1		334
-35	3	17	47	27			94
-40		5	11	5			21
LESS							11
SUM	10313	19352	37103	13797	597		81162
HOURS	78.8	234.7	1057.7	635.7	45.7	0.0	2052.6
MILES	8705	27307	124784	77188	5749	0	243733

TABLE XXXI

Maneuver n_z Peaks in Coincident n_z and Roll Rate Ranges

NZ MANEUVER PEAKS FOR																	ROLL VS NZ																	SUM
LESS	-70	-60	-50	-40	-30	-25	-20	-15	15	20	25	30	40	50	60	70																		
4.00								2									2																	
3.50						1		24	2								27																	
3.00						3	3	121	2		1						130																	
2.50				1	3	4	6	294	8	6	5	2	1				330																	
2.00					2	7	9	619	10	11	5	4	1				448																	
1.60		1	1	4	11	21	29	2678	46	27	7	8	1	1	1		2836																	
1.20	1	2	6	20	19	67	149	37473	281	103	40	35	11	2			38209																	
0.80																																		
0.25			4	19	29	75	137	7623	61	27	12	9	4	1			8001																	
-0.25		1		2		1	1	24		1	1						31																	
-0.75							1	1									2																	
-1.25																																		
SUM	1	4	11	46	64	179	335	48859	410	175	71	58	18	4	1		50236																	
HOURS	708.0																																	
MILES	83529																																	

TABLE XXXII

Roll Rate Peaks in Coincident Roll Rate and n_z Ranges

ROLL PEAKS FOR ROLL VS NZ															
	4.00	3.50	3.00	2.50	2.00	1.60	1.20	0.80	0.25	-0.25	-0.75	-1.25	LESS	SUM	
LESS								1						1	
-70							1	4	1					6	
-60					1	6	12	7	3					29	
-50				1	3	6	75	61	8					114	
-40		1		2	11	39	150	321	20					544	
-30				5	4	31	177	417	23					655	
-25				7	10	48	296	1045	51	2				1459	
-20		1	2	10	25	64	482	2389	88	1				3062	
-15															
15			2	10	22	99	744	2109	45					3031	
20	1		2	10	24	73	425	730	19					1284	
25				4	21	50	215	285	4					579	
30				5	24	50	168	179	6					432	
40				2	6	10	43	25	2					88	
50				1	2	3	12	8	2					28	
60						1		2						3	
70									1					1	
SUM	1	2	6	57	151	480	2760	7583	273	3				11316	
HOURS	708.0														
MILES	83529														

TABLE XXXIII

Maneuver n_z Peaks in Coincident n_z and Roll Rate Ranges
by Mission Segment

NZ MANEUVER PEAKS FOR		ROLL VS NZ BY MIS-SEG ASCENT																
	LESS	-70	-60	-50	-40	-30	-25	-20	-15	15	20	25	30	40	50	60	70	SUM
2.50																		
2.00									2									2
1.60									23									23
1.20								2	1365	6	1	1						1375
0.80																		
0.25							1	2	533									536
-0.25																		
SUM							1	4	1923	.6	1	1						1936
HOURS	58.8																	
MILES	6233																	

NZ MANEUVER PEAKS FOR		ROLL VS NZ BY MIS-SEG CRUISE																	
	LESS	-70	-60	-50	-40	-30	-25	-20	-15	15	20	25	30	40	50	60	70	SUM	
2.50																			
2.00							1		2									3	
1.60									9									9	
1.20						1		1	658	2	1			1				664	
0.80																			
0.25									242	1								243	
-0.25																			
SUM						1	1	1	911	3	1			1				919	
HOURS	226.6																		
MILES	26994																		

NZ MANEUVER PEAKS FOR		ROLL VS NZ BY MIS-SEG MANUVR																	
	LESS	-70	-60	-50	-40	-30	-25	-20	-15	15	20	25	30	40	50	60	70	SUM	
4.00									2									2	
3.50							1		24	2								27	
3.00							3	3	115	2		1						124	
2.50					1	3	4	6	285	7	6	5	1	1				319	
2.00						2	5	9	594	9	11	5	4	1				640	
1.60			1	1	4	9	21	27	2520	46	23	7	8	1	1	1		2670	
1.20		2	6	20	16	63	139	32232	260	100	33	35	10	2				32918	
0.80																			
0.25				3	19	29	70	126	5808	56	25	12	9	4	1			6162	
-0.25		1			2		1	1	22		1	1						29	
-0.75								1	1									2	
-1.25																			
SUM			4	10	46	59	168	312	41603	382	166	64	57	17	4	1		42893	
HOURS	377.7																		
MILES	44752																		

NZ MANEUVER PEAKS FOR		ROLL VS NZ BY MIS-SEG DESCNT																
	LESS	-70	-60	-50	-40	-30	-25	-20	-15	15	20	25	30	40	50	60	70	SUM
3.50									6									6
3.00									9	1			1					11
2.50									21	1								23
2.00							1		126		4							134
1.60						2		2	3218									3232
1.20		1				2	4	7		13	1	6						
0.80																		
0.25				1			4	9	1040	4	2							1060
-0.25									2									2
-0.75																		
SUM		1		1		4	9	18	4422	19	7	6	1					4488
HOURS	44.9																	
MILES	5551																	

TABLE XXXIV

Maneuver n_z Peaks in Coincident n_z and Roll Rate Ranges
by Gross Weight Range

NZ MANEUVER PEAKS FOR		ROLL VS NZ BY WEIGHT LESS																
	LESS	-70	-60	-50	-40	-30	-25	-20	-15	15	20	25	30	40	50	60	70	SUM
4.00																		
3.50									1									1
3.00																		
2.50									2									2
2.00									1									1
1.60									13									13
1.20									43									43
0.80																		
0.25									12									12
-0.25																		
SUM									72									72
HOURS	0.8																	
MILES	112																	

NZ MANEUVER PEAKS FOR		ROLL VS NZ BY WEIGHT 3500																
	LESS	-70	-60	-50	-40	-30	-25	-20	-15	15	20	25	30	40	50	60	70	SUM
3.00																		
2.50									1									1
2.00									2									2
1.60									3									3
1.20									91									91
0.80																		
0.25									23									23
-0.25																		
SUM									120									120
HOURS	1.3																	
MILES	190																	

NZ MANEUVER PEAKS FOR		ROLL VS NZ BY WEIGHT 3750																
	LESS	-70	-60	-50	-40	-30	-25	-20	-15	15	20	25	30	40	50	60	70	SUM
4.00																		
3.50									1									1
3.00									10									10
2.50								1	15	1	1							18
2.00									50									50
1.60			1			1		2	158	1	3	1						167
1.20		1			1	2	2	3	2323	12	3	5	2	1				2355
0.80																		
0.25				1	1	1	3	6	466	3	1	1	1					484
-0.25			1						2									3
-0.75																		
SUM		1	2	1	2	4	7	11	3025	18	8	7	3	1				3090
HOURS	22.9																	
MILES	2756																	

NZ MANEUVER PEAKS FOR		ROLL VS NZ BY WEIGHT 4000																
	LESS	-70	-60	-50	-40	-30	-25	-20	-15	15	20	25	30	40	50	60	70	SUM
4.00									2									2
3.50								1	8									9
3.00								1	46			1						50
2.50					1	1	1	2	97	3	2	2	2					111
2.00						1	2	4	195	4	2	3		1				212
1.60				1	2	2	6	12	842	11	13	1	1	1				892
1.20				4	6	3	21	46	10750	83	37	11	11	2				10974
0.80																		
0.25				1	6	12	36	49	2178	16	13	3	5	1				2320
-0.25					1		1		4									6
-0.75																		
SUM				6	16	19	69	115	14122	117	67	21	19	5				14576
HOURS	150.7																	
MILES	18285																	

TABLE XXXIV (concluded)

Maneuver n_z Peaks in Coincident n_z and Roll Rate Ranges
by Gross Weight Range

NZ MANEUVER PEAKS FOR		ROLL VS NZ BY WEIGHT 4250																SUM
LESS	-70	-60	-50	-40	-30	-25	-20	-15	15	20	25	30	40	50	60	70		
4.00								10	2								12	
3.50								50	1								52	
3.00						2	2	143	3	3	3		1				161	
2.50						1	5	306	6	7	2	4					335	
2.00					6	11	13	1348	31	10	4	4			1	1	1429	
1.60																		
1.20			2	2	12	12	31	77	18581	150	52	23	22	5	1		18970	
0.80																		
0.25				2	11	13	30	73	3476	33	11	7		3	1		3660	
-0.25					1				13			1					15	
-0.75								1	1								2	
-1.25																		
SUM			2	4	24	34	80	172	23928	226	83	40	30	9	3	1	24636	
HOURS	293.8																	
MILES	34905																	

NZ MANEUVER PEAKS FOR		ROLL VS NZ BY WEIGHT 4500																
	LESS	-70	-60	-50	-40	-30	-25	-20	-15	15	20	25	30	40	50	60	70	SUM
4.00									4									4
3.50									15									16
3.00								1	36	1								37
2.50									45		2							48
2.00								1	312	3	1	1	3					330
1.60					2	2	4	2	5475	36	10	1		3	1			5564
1.20					1	2	13	22										
0.80																		
0.25					1	3	6	9	1349	9	2	1	3					1383
-0.25								1	5		1							7
-0.75																		
SUM					4	7	23	36	7261	49	16	3	6	3	1			7409
HOURS	199.9																	
MILES	23142																	

NZ MANEUVER PEAKS FOR ROLL VS NZ BY WEIGHT 4750																		
	LESS	-70	-60	-50	-40	-30	-25	-20	-15	15	20	25	30	40	50	60	70	SUM
2.00																		
1.60									2									2
1.20								1	210		1							212
0.80																		
0.25									119									119
-0.25																		
SUM								1	331		1							333
HOURS	33.3																	
MILES	4139																	

TABLE XXXV

Maneuver n_z Peaks in Coincident n_z and Roll Rate Ranges by Altitude Range

NZ MANEUVER PEAKS FOR ROLL VS NZ BY ALTITUDE LESS																		
	LESS	-70	-60	-50	-40	-30	-25	-20	-15	15	20	25	30	40	50	60	70	SUM
4.00									1									1
3.50									11									12
3.00									15									15
2.50									29									31
2.00							1		213		1							220
1.60							2		3348	5								3394
1.20				1		1	3	12	672	24	2	3						691
0.80									1									1
0.25						1	3	9		3	2	1						
-0.25																		
-0.75																		
SUM				1		2	9	22	4290	32	5	4						4365
HOURS	30.9																	
MILES	3299																	
NZ MANEUVER PEAKS FOR ROLL VS NZ BY ALTITUDE 1000																		
	LESS	-70	-60	-50	-40	-30	-25	-20	-15	15	20	25	30	40	50	60	70	SUM
4.00									1									1
3.50									9	1								11
3.00									43									45
2.50									85	4	3	2		1				97
2.00									198	2	3	1		1				207
1.60					1	5	11	7	663	10	9	2	2					710
1.20		1	1	1	2	4	9	50	9637	61	24	11	8	1	1			9811
0.80																		
0.25				1	1	5	11	31	1646	9	3	3		1				1711
-0.25									8									8
-0.75									1									1
-1.25																		
SUM		1	1	2	4	14	34	93	12290	87	42	19	10	4	1			12602
HOURS	108.7																	
MILES	12447																	
NZ MANEUVER PEAKS FOR ROLL VS NZ BY ALTITUDE 2000																		
	LESS	-70	-60	-50	-40	-30	-25	-20	-15	15	20	25	30	40	50	60	70	SUM
4.00									11	1								12
3.50									49	2		1						55
3.00									141	3	3	2	2					161
2.50					1	3	2	4	275	5	5	4	2					301
2.00						1	5	4	13	1206	19	9	2	5	1	1		1269
1.60			1	1	3	4	4	13	18315	122	60	19	21	7	1			18667
1.20				3	14	8	38	59	18315	122	60	19	21	7	1			18667
0.80																		
0.25				3	16	16	40	55	4054	38	19	6	7	1	1			4256
-0.25			1		2		1	1	13		1	1						20
-0.75																		
-1.25																		
SUM		2	7	36	32	92	137	24064	190	97	35	37	9	3				24741
HOURS	347.7																	
MILES	41155																	
NZ MANEUVER PEAKS FOR ROLL VS NZ BY ALTITUDE 5000																		
	LESS	-70	-60	-50	-40	-30	-25	-20	-15	15	20	25	30	40	50	60	70	SUM
4.00									4									4
3.50									18									18
3.00									53	1		1						57
2.50									115	3	2		2					127
2.00							1	1	3	115	3	2	2					127
1.60							2	4	9	594	12	9	3	1				635
1.20			1	1	4	4	17	28	6115	73	17	7	6	3		1		6276
0.80																		
0.25						2	7	21	42	1216	11	3	2	2	2			1308
-0.25									2									2
-0.75									1									1
-1.25																		
SUM		1	1	6	14	44	83	8118	100	31	13	11	5			1		8428
HOURS	206.7																	
MILES	24883																	
NZ MANEUVER PEAKS FOR ROLL VS NZ BY ALTITUDE 10000																		
	LESS	-70	-60	-50	-40	-30	-25	-20	-15	15	20	25	30	40	50	60	70	SUM
2.50																		
2.00									2									2
1.60									2									2
1.20									58	1								61
0.80							2											
0.25									35									35
-0.25																		
-0.75																		
-1.25																		
SUM							2		97	1								100
HOURS	14.1																	
MILES	1747																	

TABLE XXXVI

Maneuver n_z Peaks in Coincident n_z and Roll Rate Ranges
by Airspeed Range

NZ MANEUVER PEAKS FOR		ROLL VS NZ BY VELOCITY																SUM
LESS		-70	-60	-50	-40	-30	-25	-20	-15	15	20	25	30	40	50	60	70	
0.80																		
0.25									29									29
-0.25									1									1
-0.75																		
SUM									30									30

HOURS 0.1
MILES 7

NZ MANEUVER PEAKS FOR		ROLL VS NZ BY VELOCITY																SUM
LESS		-70	-60	-50	-40	-30	-25	-20	-15	15	20	25	30	40	50	60	70	
2.00								1	15									16
1.60								4	1030	4	6		2					1048
1.20			1			1												
0.80																		
0.25					?	4	10	6	447	5	1	1						475
-0.25					1			1	1									4
-0.75																		
SUM			1		3	5	10	12	1493	9	7	1	2					1543

HOURS 40.6
MILES 3686

NZ MANEUVER PEAKS FOR		ROLL VS NZ BY VELOCITY																SUM
LESS		-70	-60	-50	-40	-30	-25	-20	-15	15	20	25	30	40	50	60	70	
3.00																		
2.50									11				1					12
2.00									67	1	1	2	3					76
1.60				1	2	7	10	10	945	11	8	1	4					999
1.20			1	2	8	10	42	71	21970	140	52	17	20	7	1			22341
0.80																		
0.25				3	11	18	43	69	4012	32	13	5	6					4212
-0.25			1						7		1							9
-0.75									1									1
-1.25																		
SUM			2	6	21	35	97	150	27013	184	75	25	34	7	1			27650

HOURS 505.6
MILES 57630

NZ MANEUVER PEAKS FOR		ROLL VS NZ BY VELOCITY																SUM
LESS		-70	-60	-50	-40	-30	-25	-20	-15	15	20	25	30	40	50	60	70	
4.00								1										1
3.50									20	1								22
3.00									97	3	1	3		1				111
2.50					1	3		2	367	7	7	1						396
2.00					2	3	3	9	1524	29	15	5	3	1	1	1		1610
1.60			1		2	3	10	15	1524	29	15	5	3	1	1	1		1610
1.20				4	12	8	24	68	13375	119	43	21	13	4	1			13692
0.80																		
0.25					6	6	16	55	2785	21	11	6	3	4	1			2914
-0.25								1	10									11
-0.75																		1
-1.25																		
SUM			1	4	21	22	56	150	18178	180	77	36	19	10	3	1		18758

HOURS 154.4
MILES 20991

NZ MANEUVER PEAKS FOR		ROLL VS NZ BY VELOCITY																SUM
LESS		-70	-60	-50	-40	-30	-25	-20	-15	15	20	25	30	40	50	60	70	
4.00									2									2
3.50									24	2								26
3.00								2	3	101	1	1						108
2.50								4	4	184	5	2	1					207
2.00								2	184	2	3	2	1	1				196
1.60						1	1	3	194	6	4	1	1					211
1.20			1				1	6	1098	18	2	2						1128
0.80																		
0.25					1		1	6	350	3	2	1						371
-0.25						1			5									6
-0.75																		
-1.25																		
SUM			1		1	1	2	16	23	2145	37	16	9	3	1			2255

HOURS 7.3
MILES 1216

TABLE XXXVII

Maneuver n_z Peaks in Coincident n_z and Roll Rate Ranges
by Aircraft Configuration

NZ MANEUVER PEAKS FOR		ROLL VS NZ BY CONFIG 1																
LESS	-70	-60	-50	-40	-30	-25	-20	-15	15	20	25	30	40	50	60	70	SUM	
3.50								3									3	
3.00								10									11	
2.50					1			30									30	
2.00								136		1							140	
1.60					1		2	2942	7	2	3						2957	
1.20			1				2	601	1		1						608	
0.80								1									1	
0.25						2	3											
-0.25																		
-0.75																		
SUM			1		2	2	7	3723	6	3	4						3750	
HOURS	39.9																	
MILES	4527																	

NZ MANEUVER PEAKS FOR		ROLL VS NZ BY CONFIG 2																SUM
LESS	-70	-60	-50	-40	-30	-25	-20	-15	15	20	25	30	40	50	60	70		
4.00								1									1	
3.50								13	2								15	
3.00								60	1								63	
2.50						2	2	164	6	2	3	2					181	
2.00					1	6	4	371	7	7	3	4	1				404	
1.60					2	9	16	14	1782	32	16	5	6	1	1		1885	
1.20			2	1	15	16	51	110	21448	214	70	26	24	8	2	1	26987	
0.80																		
0.25				3	13	18	45	93	5366	41	19	8	5	4	1		5616	
-0.25					1		1	18			1	1					23	
-0.75																	1	
-1.25																		
SUM			2	4	31	44	122	226	34223	303	115	46	41	14	4	1	35176	
HOURS	366.9																	
MILES	43573																	

NZ MANEUVER PEAKS FOR		ROLL VS NZ BY CONFIG 3																SUM
LESS	-70	-60	-50	-40	-30	-25	-20	-15	15	20	25	30	40	50	60	70		
4.00								1									1	
3.50								10									10	
3.00						1	1	34			1						37	
2.50						1	3	68		2	2		1				77	
2.00						1	4	103	1	4	2						115	
1.60			1	1		2	6	316	8	6	1	1					343	
1.20	1		3	1	2	6	24	3624	34	14	7	7	2				3725	
0.80																		
0.25			1	4	8	16	14	571	13	4	2	2					635	
-0.25				1				1									2	
-0.75																		
SUM	1		5	7	10	28	52	4728	56	30	15	10	3				4945	
HOURS	45.1																	
MILES	5367																	

NZ MANEUVER PEAKS FOR		ROLL VS NZ BY CONFIG 4																SUM
LESS	-70	-60	-50	-40	-30	-25	-20	-15	15	20	25	30	40	50	60	70		
3.50																		
3.00						1		11									12	
2.50					1	1		33	1	2							38	
2.00						1	1	50	2								54	
1.60			1		1		5	186	1	4	1						199	
1.20				3	1	5	8	1320	12	9	2	4	1				1365	
0.80																		
0.25					2	1	8	11	233	4	3	1	1				264	
-0.25		1						1									2	
-0.75								1									1	
-1.25																		
SUM			2		7	3	15	25	1835	20	18	4	5	1			1935	
HOURS	14.9																	
MILES	1845																	

TABLE XXXVII (continued)

Maneuver n_z Peaks in Coincident n_z and Roll Rate Ranges
by Aircraft Configuration

NZ MANEUVER PEAKS FOR		ROLL VS NZ BY CONFIG 5																SUM
LESS	-70	-60	-50	-40	-30	-25	-20	-15	15	20	25	30	40	50	60	70		
4.00																		
3.50						1		1									2	
3.00								7	1								8	
2.50								4	1								5	
2.00								17									17	
1.60						1		81									82	
1.20			1			3		917	1	1	2						925	
0.80																		
0.25					2	2	7	286	1								298	
-0.25								2									2	
-0.75																		
SUM			1		2	7	7	1315	4	1	2						1339	
HOURS	11.1																	
MILES	1305																	

NZ MANUEVER PEAKS FOR ROLL VS NZ BY CONFIG 6																	
LESS	-70	-60	-50	-40	-30	-25	-20	-15	15	20	25	30	40	50	60	70	SUM
2.50																	
2.00								6									6
1.60						1	1	34				1					37
1.20								382	1	1							384
0.80																	
0.25							1	175				1					177
-0.25																	
SUM						1	2	597	1	1		2					604
HOURS	63.8																
MILES	7209																

NZ MANEUVER PEAKS FOR ROLL VS NZ BY CONFIG 7																	
LESS	-70	-60	-50	-40	-30	-25	-20	-15	15	20	25	30	40	50	60	70	SUM
2.50																	
2.00								3									3
1.60								5									5
1.20								183									183
0.80																	
0.25							1	104									105
-0.25																	
SUM							1	295									296
HOURS	15.2																
MILES	1849																

NZ MANEUVER PEAKS FOR								ROLL VS NZ BY										CONFIG		8												
	LESS	-70	-60	-50	-40	-30	-25	-20	-15	15	20	25	30	40	50	60	70	SUM														
2.00																																
1.60									3										3													
1.20									73										73													
0.80																																
0.25									31										31													
-0.25																																
SUM									107										107													
HOURS	5.5																															
MILES	646																															

TABLE XXXVII (concluded)

Maneuver n_z Peaks in Coincident n_z and Roll Rate Ranges
by Aircraft Configuration

NZ MANEUVER PEAKS FOR ROLL VS NZ BY CONFIG 9																		
	LESS	-70	-60	-50	-40	-30	-25	-20	-15	15	20	25	30	40	50	60	70	SUM
3.50																		
3.00								1	1									2
2.50								1	10									11
2.00									19									19
1.60									93	4								97
1.20							1	5	1335	11	2							1354
0.80																		
0.25							1	4	181	1	1							188
-0.25									1									1
-0.75																		
SUM							2	11	1640	16	3							1672
HOURS	135.0																	
MILES	15979																	

NZ MANEUVER PEAKS FOR ROLL VS NZ BY CONFIG 10																		
	LESS	-70	-60	-50	-40	-30	-25	-20	-15	15	20	25	30	40	50	60	70	SUM
3.50																		3
3.00									3									3
2.50						1			1									2
2.00									13									13
1.60							1	1	26	1								29
1.20					1		1		104	1	2							109
0.80																		
0.25								1	38									39
-0.25																		
SUM					1	1	2	2	185	2	2							195
HOURS	4.0																	
MILES	472																	

NZ MANEUVER PEAKS FOR ROLL VS NZ BY CONFIG 11																		
	LESS	-70	-60	-50	-40	-30	-25	-20	-15	15	20	25	30	40	50	60	70	SUM
3.50																		
3.00									1									1
2.50									4									4
2.00									3									3
1.60									4									4
1.20									61		2							63
0.80																		
0.25							1	1	7									9
-0.25																		
SUM							1	1	80		2							84
HOURS	3.7																	
MILES	442																	

NZ MANEUVER PEAKS FOR ROLL VS NZ BY CONFIG 12																		
	LESS	-70	-60	-50	-40	-30	-25	-20	-15	15	20	25	30	40	50	60	70	SUM
3.50																		
3.00									1									1
2.50						1												1
2.00									4									4
1.60									12									12
1.20									84									84
0.80																		
0.25								1	30									31
-0.25																		
SUM						1		1	131									133
HOURS	2.8																	
MILES	313																	

TABLE XXXVIII

Roll Rate Peaks in Coincident Roll Rate and n_z Ranges
by Mission SegmentROLL PEAKS FOR ROLL VS n_z BY MISSION SEG. ASCENT

	4.00	3.50	3.00	2.50	2.00	1.60	1.20	0.80	0.25	-0.25	-0.75	-1.25	LESS	SUM
-50														
-40								2						2
-30								5						5
-25							6	15	2					23
-20							6	51	1					58
-15														
15							6	52						58
20							1	6						7
25						1	4	4						9
30							1							1
40														
SUM						1	24	135	3					163

HOURS 28.8
MILES 6233ROLL PEAKS FOR ROLL VS n_z BY MISSION SEG. CRUISE

	4.00	3.50	3.00	2.50	2.00	1.60	1.20	0.80	0.25	-0.25	-0.75	-1.25	LESS	SUM
-40														
-30						1	2	3						6
-25							1	14						15
-20							2	56						58
-15														
15							2	40	1					43
20							2	2						4
25								6						6
30														
40							1							1
50														
SUM						1	10	121	1					133

HOURS 226.6
MILES 26994ROLL PEAKS FOR ROLL VS n_z BY MISSION SEG. MANUVR

	4.00	3.50	3.00	2.50	2.00	1.60	1.20	0.80	0.25	-0.25	-0.75	-1.25	LESS	SUM
LESS														
-70							1	4	1					6
-60					1	6	11	7	3					28
-50				1	3	6	35	59	8					112
-40		1		2	10	38	140	303	18					512
-30				5	2	29	171	382	22					611
-25				7	10	48	276	963	46	2				1352
-20		1	2	10	24	60	454	2195	84	1				2791
-15														
15				2	10	22	698	1890	40					2758
20		1		2	10	23	408	687	18					1219
25				4	21	49	200	257	4					535
30				5	24	47	161	169	6					412
40				2	6	9	40	25	2					84
50				1		3	12	7	2					25
60						1		2						3
70														1
SUM	1	2	6	57	146	462	2607	6910	255	2				10449

HOURS 377.7
MILES 44752ROLL PEAKS FOR ROLL VS n_z BY MISSION SEG. DESCNT

	4.00	3.50	3.00	2.50	2.00	1.60	1.20	0.80	0.25	-0.25	-0.75	-1.25	LESS	SUM
LESS														
-70								1						1
-60							1	2						2
-50														
-40					1	1	10	16	2					30
-30						1	4	27	1					33
-25							13	53	3					69
-20					1	4	20	127	3					155
-15														
15						3	38	127	4					172
20					1	3	14	35	1					54
25							11	18						29
30						3	6	10						19
40						1	2							3
50					2			1						3
60														
SUM					5	16	119	417	14					571

HOURS 44.9
MILES 5551

TABLE XXXIX

Roll Rate Peaks in Coincident Roll Rate and n_z Ranges
by Gross Weight Range

ROLL PEAKS FOR ROLL VS NZ BY WEIGHT LESS														SUM
	4.00	3.50	3.00	2.50	2.00	1.60	1.20	0.80	0.25	-0.25	-0.75	-1.25	LESS	
-30														
-25							1							1
-20							3	6	2					11
-15														
15						1	4	5						10
20							2	2						4
25														
SUM						1	10	13	2					26
HOURS	0.8													
MILES	112													

ROLL PEAKS FOR ROLL VS NZ BY WEIGHT 3500														SUM
	4.00	3.50	3.00	2.50	2.00	1.60	1.20	0.80	0.25	-0.25	-0.75	-1.25	LESS	
-40														
-30							1							1
-25							1	3						4
-20					1			12						13
-15														
15							1	3						4
20						1								1
25								1						1
30														
SUM					1	1	3	19						24
HOURS	1.5													
MILES	190													

ROLL PEAKS FOR ROLL VS NZ BY WEIGHT 3750														SUM
	4.00	3.50	3.00	2.50	2.00	1.60	1.20	0.80	0.25	-0.25	-0.75	-1.25	LESS	
LESS														
-70								1		1				1
-60						1								1
-50								4						4
-40		1				3	8	26	1					39
-30							7	19	1					27
-25					1		18	46	6					71
-20					1	8	16	93	3					121
-15														
15					1	4	34	100	2					141
20			1	3	1	6	22	30	1					64
25						6	14	14	1					35
30						3	17	8						23
40					1	1		1						3
50						1	1							2
60														
SUM		1	1	5	3	33	132	342	16					533
HOURS	22.9													
MILES	2756													

ROLL PEAKS FOR ROLL VS NZ BY WEIGHT 4000														SUM
	4.00	3.50	3.00	2.50	2.00	1.60	1.20	0.80	0.25	-0.25	-0.75	-1.25	LESS	
LESS														
-70						3	4	2						2
-60						2	15	17	1					10
-50				1					4					39
-40				1		10	56	117	4					192
-30				5	1	14	51	141	8					220
-25				2	1	21	93	313	17					447
-20			1	5	7	21	134	610	28					806
-15														
15					7	6	31	205	538	12				799
20		1		1	2	13	29	124	191	3				366
25					1	9	19	65	88	1				183
30					4	16	17	62	54	3				156
40					1	3	1	19	10	2				36
50					1	2	1	2	3					9
60									1					1
70														
SUM	1		2	30	62	169	832	2087	83					3266
HOURS	150.7													
MILES	13285													

TABLE XXXIX (concluded)

Roll Rate Peaks in Coincident Roll Rate and n_z Ranges
by Gross Weight Range

ROLL PEAKS FOR ROLL VS n_z BY WEIGHT 4250														LESS	SUM
	4.00	3.50	3.00	2.50	2.00	1.60	1.20	0.80	0.25	-0.25	-0.75	-1.25			
LESS															
-70							1	2							3
-60					1	1	7	5	2						16
-50					3	4	18	33	4						62
-40				1	5	21	66	130	13						236
-30						11	101	198	11						321
-25				4	8	21	139	551	22	2					747
-20				4	14	27	251	1294	40	1					1631
-15															
15			1	3	12	56	400	1079	20						1571
20				4	9	30	234	389	14						680
25				2	6	20	110	143	2						283
30				1	5	21	82	95	2						206
40					1	5	17	12							35
50						1	7	5	1						14
60						1		1							2
70									1						1
SUM			1	19	64	219	1433	3937	132	3					5808

HOURS 293.8
MILES 34905

ROLL PEAKS FOR ROLL VS n_z BY WEIGHT 4500														LESS	SUM
	4.00	3.50	3.00	2.50	2.00	1.60	1.20	0.80	0.25	-0.25	-0.75	-1.25			
-70															
-60						1	1								2
-50							2	7							9
-40					2	5	20	47	2						76
-30					1	6	17	58	3						85
-25					1	6	44	126	6						183
-20		1	1	1	2	8	75	361	15						464
-15															
15			1		3	7	99	365	11						486
20				1	1	7	41	114	1						165
25				1	6	5	25	39							76
30					3	9	12	22	1						47
40					2	3	7	2							14
50							2		1						3
60															
SUM		1	2	3	21	57	345	1141	40						1610

HOURS 199.9
MILES 23142

ROLL PEAKS FOR ROLL VS n_z BY WEIGHT 4750														LESS	SUM
	4.00	3.50	3.00	2.50	2.00	1.60	1.20	0.80	0.25	-0.25	-0.75	-1.25			
-50								1							1
-40								1							1
-30								6							6
-25								3	13						16
-20															
-15															
15							1	19							20
20								4							4
25							1								1
30															
SUM							5	44							49

HOURS 38.3
MILES 4139

TABLE XL

Roll Rate Peaks in Coincident Roll Rate and n_z Ranges
by Altitude Range

ROLL PEAKS FOR ROLL VS n_z BY ALTITUDE LESS													
	4.00	3.50	3.00	2.50	2.00	1.60	1.20	0.80	0.25	-0.25	-0.75	-1.25	LESS
-60													
-50							1	1					2
-40							6	7	1				14
-30						1	10	22	2				35
-25				1		1	18	57	2				79
-20					1	5	34	155	3	1			199
-15													
15			1	2	2	4	66	143	2				220
20	1		1	2	1	3	27	65					100
25						5	15	22					42
30					1	1	12	6					20
40						1	1						2
50													
SUM	1		2	5	5	21	190	478	10	1			713
HOURS	30.9												
MILES	3299												

ROLL PEAKS FOR ROLL VS n_z BY ALTITUDE 1000													
	4.00	3.50	3.00	2.50	2.00	1.60	1.20	0.80	0.25	-0.25	-0.75	-1.25	LESS
LESS													
-70								1					1
-60							4	2					2
-50						1	6	14	1				5
-40					1	11	33	53	3				21
-30				2		12	36	91	2				101
-25				1	3	15	67	240	9	1			143
-20			2	3	6	15	112	490	16				336
-15													644
15			1	4	6	23	161	510	2				707
20				2	8	19	101	146	7				283
25				1	3	17	48	53					132
30				1	12	14	39	41					107
40				1	3	1	6	4					15
50				1			1	2					4
60								1					1
70													
SUM			3	16	42	128	614	1658	40	1			2502
HOURS	108.7												
MILES	12447												

ROLL PEAKS FOR ROLL VS n_z BY ALTITUDE 2000													
	4.00	3.50	3.00	2.50	2.00	1.60	1.20	0.80	0.25	-0.25	-0.75	-1.25	LESS
LESS													
-70						5	7	2	1				3
-60						5	20	31	8				21
-50				1	2	22	88	205	10				67
-40				2	2	14	86	222	12				335
-30				3	7	21	148	509	30	1			338
-25			1	5	14	24	211	1148	43				719
-20													1446
-15													
15				4	14	51	324	1048	23				1464
20			1	6	13	38	198	392	7				655
25				3	17	20	106	143	3				292
30				3	10	27	85	107	4				236
40				1	2	6	26	17	2				54
50					2	3	7	4	2				18
60													
70													
SUM		2	1	30	90	236	1306	3835	148	1			5649
HOURS	347.7												
MILES	41155												

TABLE XL (concluded)

Roll Rate Peaks in Coincident Roll Rate and n_z Ranges
by Altitude Range

ROLL PEAKS FOR ROLL VS NZ BY ALTITUDE 5000														LESS	SUM
	4.00	3.50	3.00	2.50	2.00	1.50	1.20	0.80	0.25	-0.25	-0.75	-1.25			
LESS															
-70							1								1
-60					1	1	1								3
-50					1		8	15							24
-40					3	6	23	56		6					94
-30				1		4	43	80		7					135
-25				2		17	63	238		10					324
-20				2	4	20	125	589		26					766
-15															
15						21	192	400		17					630
20					2	13	98	124		5					242
25					1	8	45	55		1					110
30				1	1	8	32	25		2					69
40					1	2	10	4							17
50							3	2							5
60						1		1							2
70															
SUM				6	14	95	644	1589		74					2422

HOURS 206.7
MILES 24883

ROLL PEAKS FOR ROLL VS NZ BY ALTITUDE 10000														LESS	SUM
	4.00	3.50	3.00	2.50	2.00	1.50	1.20	0.80	0.25	-0.25	-0.75	-1.25			
-40															
-30							2	2							4
-25								1							1
-20								7							7
-15															
15							1	6	1						10
20							1	3							4
25							1	2							3
30															
40															
50							1								1
60															
SUM							6	23	1						30

HOURS 14.1
MILES 1747

TABLE XLI

Roll Rate Peaks in Coincident Roll Rate and n_z Ranges
by Airspeed Range

ROLL PEAKS FOR ROLL VS n_z BY VELOCITY														LESS	SUM
	4.00	3.50	3.00	2.50	2.00	1.60	1.20	0.80	0.25	-0.25	-0.75	-1.25			
-70															
-60										1					1
-50															
-40								1							1
-30															
-25															
-20									2						2
-15										1					1
15															
20															
SUM								1	4						5
HOURS	0.1														
MILES	7														

ROLL PEAKS FOR ROLL VS n_z BY VELOCITY														60	
	4.00	3.50	3.00	2.50	2.00	1.60	1.20	0.80	0.25	-0.25	-0.75	-1.25		LESS	SUM
-70															
-60							1								1
-50							1	2	1						4
-40						1	6	14	4						25
-30						1	3	9							13
-25							7	33	11						51
-20						2	17	96	6						121
-15															
15						3	12	67	6						88
20							9	24	3						36
25							3	11							14
30							3	7							10
40								1							1
50															
60															
70									1						1
SUM						7	62	264	32						365
HOURS	40.6														
MILES	3686														

ROLL PEAKS FOR ROLL VS n_z BY VELOCITY														90	
	4.00	3.50	3.00	2.50	2.00	1.60	1.20	0.80	0.25	-0.25	-0.75	-1.25		LESS	SUM
LESS															
-70								2							2
-60						3	3	3	2						11
-50					1		19	32	5						57
-40					1	17	61	171	11						261
-30					1	12	82	253	14						362
-25						15	136	613	27						791
-20					3	23	233	1441	41						1743
-15															
15					1	23	338	1259	14						1640
20				1	1	17	187	408	8						622
25					1	5	91	145	3						245
30						12	61	98	3						174
40						4	18	16	1						39
50					2		7	3	1						13
60								1							1
70															
SUM				1	11	131	1238	4445	135						5961
HOURS	505.6														
MILES	57630														

TABLE XLI (concluded)

Roll Rate Peaks in Coincident Roll Rate and n_z Ranges
by Airspeed Range

ROLL PEAKS FOR ROLL VS n_z BY VELOCITY													120	
LESS	4.00	3.50	3.00	2.50	2.00	1.60	1.20	0.80	0.25	-0.25	-0.75	-1.25	LESS	SUM
-70							1	2	1					4
-60					1	2	6	4						13
-50					1	3	12	24	2					42
-40				2	7	15	65	118	3					210
-30				2		11	78	140	5					236
-25					6	26	137	361	9	2				540
-20		1	1	4	11	30	204	806	34	1				1092
-15														
15			1	2	9	54	344	729	15					1154
20					13	38	190	266	6					513
25				1	6	29	113	112	1					262
30				2	6	19	72	62	3					164
40					3	3	19	7	1					33
50						2	5	4	1					12
60						1		1						2
70														
SUM		1	2	13	63	233	1245	2636	81	3				4277
HOURS	154.4													
MILES	20991													

ROLL PEAKS FOR ROLL VS n_z BY VELOCITY													150	
LESS	4.00	3.50	3.00	2.50	2.00	1.60	1.20	0.80	0.25	-0.25	-0.75	-1.25	LESS	SUM
-70						1	2	1						1
-60						1	3	3						3
-50				1	1	5	18	17	2					11
-40		1			3	6	14	15	4					47
-30				3	1	7	14	15	4					44
-25				7	4	7	17	38	4					77
-20			1	6	11	9	26	46	5					104
-15														
15			1	8	12	19	50	54	4					148
20	1		2	9	10	18	39	32	2					113
25				3	14	16	8	17						58
30				3	18	19	32	12						84
40				2	3	3	6	1						15
50				1		1		1						3
60														
SUM	1	1	4	43	77	109	215	237	21					708
HOURS	7.3													
MILES	1216													

TABLE XLII

Roll Rate Peaks in Coincident Roll Rate and n_z Ranges
by Aircraft ConfigurationROLL PEAKS FOR ROLL VS n_z BY CONFIGURATION 1

	4.00	3.50	3.00	2.50	2.00	1.60	1.20	0.80	0.25	-0.25	-0.75	-1.25	LESS	SUM
-60							1							1
-50							3	4	1					8
-40						1		12						14
-30				1		2	8	20	2					32
-25						5	14	67	3					90
-20				1										
-15														
15						5	16	48	1					70
20							8	10						18
25						3	4	8						15
30						1	5	3						9
40						1	1							2
50														
SUM				2		18	60	172	7					259
HOURS	39.9													
MILES	4527													

ROLL PEAKS FOR ROLL VS n_z BY CONFIGURATION 2

	4.00	3.50	3.00	2.50	2.00	1.60	1.20	0.80	0.25	-0.25	-0.75	-1.25	LESS	SUM
LESS														
-70							1	4						5
-60					1	1	9	6	2					19
-50					2	3	19	43	5					72
-40					7	23	92	210	13					345
-30					1	20	123	286	11					441
-25				3	7	29	194	738	31	2				1004
-20			1	6	16	35	338	1789	61					2246
-15														
15				2	3	12	63	526	1523	30				2159
20		1		1	4	11	39	290	517	12				875
25					2	12	26	147	194	2				383
30					1	10	29	101	121	5				267
40					1	4	7	29	19	1				61
50					2	2	11	7	1					23
60							1	2						3
70									1					1
SUM	1	1	3	20	85	278	1880	5459	175	2				7904
HOURS	366.9													
MILES	43573													

ROLL PEAKS FOR ROLL VS n_z BY CONFIGURATION 3

	4.00	3.50	3.00	2.50	2.00	1.60	1.20	0.80	0.25	-0.25	-0.75	-1.25	LESS	SUM
LESS														
-70								1						1
-60						2	2	1	1					6
-50				1	1	2	12	10	3					29
-40					1	6	31	42	4					84
-30				3	1	3	28	60	9					104
-25				2	1	14	46	123	8					194
-20			1	2	8	10	71	210	13					315
-15														
15				5	5	19	92	200	6					327
20				2	9	21	60	71	4					167
25				2	5	9	38	40	1					95
30				3	10	14	29	33						89
40				1	1		9	3	1					15
50									1					1
60														
SUM			1	21	42	100	418	794	51					1427
HOURS	45.1													
MILES	5367													

TABLE XLII (Continued)

Roll Rate Peaks in Coincident Roll Rate
and n_z Ranges by Aircraft ConfigurationROLL PEAKS FOR ROLL VS n_z BY CONFIGURATION

	4.00	3.50	3.00	2.50	2.00	1.60	1.20	0.80	0.25	-0.25	-0.75	-1.25	LESS	SUM
LESS														
-70									1					1
-60						3	1							4
-50						1	2	4						7
-40		1		1	1	4	13	37	1					58
-30				1		3	11	22	1					38
-25				2		1	19	58	4					84
-20				1	1	7	21	85	1					116
-15														
15				1	4	8	37	77	3					130
20				3	2	7	30	39	1					82
25					3	5	17	9	1					35
30					2	4	16	12						34
40					1		2	3						6
50				1			1	1						4
60														
SUM		1		10	14	44	170	347	13					599

HOURS 14.9
MILES 1845

ROLL PEAKS FOR ROLL VS n_z BY CONFIGURATION 5

	4.00	3.50	3.00	2.50	2.00	1.60	1.20	0.80	0.25	-0.25	-0.75	-1.25	LESS	SUM
-60								4						4
-50								12						14
-40						1	3	7	1					11
-30								25	4					34
-25						1	6	28	5					40
-20														
-15														
15				1	1		13	28	3					46
20			1	1	1	2	2	14						21
25						4	1	7						12
30				1			4	2						7
40														
SUM			1	3	2	8	35	127	13					189

HOURS 11.1
MILES 1305

ROLL PEAKS FOR ROLL VS n_z BY CONFIGURATION 6

	4.00	3.50	3.00	2.50	2.00	1.60	1.20	0.80	0.25	-0.25	-0.75	-1.25	LESS	SUM
-60								1						1
-50								4						10
-40						2	4	2						6
-30						1	3	6						11
-25							5	39						43
-20						3	1							
-15														
15							8	33						41
20						1	2	12						15
25							3	5						8
30						1	1	1	1					4
40							1							1
50														
SUM						8	29	102	1					140

HOURS 63.8
MILES 7209

ROLL PEAKS FOR ROLL VS n_z BY CONFIGURATION 7

	4.00	3.50	3.00	2.50	2.00	1.60	1.20	0.80	0.25	-0.25	-0.75	-1.25	LESS	SUM
-50									1					1
-40								1						1
-30								3						3
-25								11						11
-20														
-15														
15							2	15						17
20							1	1						2
25							1							1
30														
SUM							4	31	1					36

HOURS 15.2
MILES 1849

TABLE XLII (Concluded)

Roll Rate Peaks in Coincident Roll Rate
and n_z Ranges by Aircraft ConfigurationROLL PEAKS FOR ROLL VS n_z BY CONFIGURATION 8

	4.00	3.50	3.00	2.50	2.00	1.60	1.20	0.80	0.25	-0.25	-0.75	-1.25	LESS	SUM
-30														
-25								3						3
-20								8						8
-15														
15							3	6	1					10
20							2	1						3
25														
SUM							5	18	1					24

HOURS 5.5

MILES 646

ROLL PEAKS FOR ROLL VS n_z BY CONFIGURATION 9

	4.00	3.50	3.00	2.50	2.00	1.60	1.20	0.80	0.25	-0.25	-0.75	-1.25	LESS	SUM
-50														
-40					1	1	4	10						16
-30					2	2	7	19	1					29
-25					2	1	15	56						74
-20			1			3	27	120	3	1				155
-15														
15						2	39	144						135
20						2	25	56	1					84
25					1	2	4	17						24
30					2	1	5	2						10
40						1								1
50														
SUM			1		6	15	126	424	5	1				578

HOURS 135.0

MILES 15979

ROLL PEAKS FOR ROLL VS n_z BY CONFIGURATION 10

	4.00	3.50	3.00	2.50	2.00	1.60	1.20	0.80	0.25	-0.25	-0.75	-1.25	LESS	SUM
-50														
-40					1	1	1							3
-30						1	1	5						7
-25						1	3	9						13
-20							4	20	1					25
-15														
15						2	4	21	1					28
20					1		3	5						9
25						1		2						3
30							3	4						7
40						1								1
50														
SUM					2	7	19	66	2					96

HOURS 4.0

MILES 472

ROLL PEAKS FOR ROLL VS n_z BY CONFIGURATION 11

	4.00	3.50	3.00	2.50	2.00	1.60	1.20	0.80	0.25	-0.25	-0.75	-1.25	LESS	SUM
-50														
-40						1		2						3
-30								1						1
-25								3	2					5
-20								3	1					4
-15														
15							2	3						5
20								3						3
25								2						2
30							2							2
40														
50														
SUM						1	4	17	3					25

HOURS 3.7

MILES 442

ROLL PEAKS FOR ROLL VS n_z BY CONFIGURATION 12

	4.00	3.50	3.00	2.50	2.00	1.60	1.20	0.80	0.25	-0.25	-0.75	-1.25	LESS	SUM
-50														
-40				1			1							2
-30							1	2						3
-25							1	1						2
-20								9						9
-15														
15							2	11						13
20						1	2	1	1					5
25								1						1
30							2	1						3
40							1							1
50														
SUM				1		1	10	26	1					39

HOURS 2.8

MILES 313

TABLE XLIII

Maneuver n_z Peaks in Coincident n_z and Pitch Rate Ranges

NZ MANEUVER PEAKS FOR PITCH VS NZ												
	LESS	-25	-20	-15	-10	-5	5	10	15	20	25	SUM
4.00										2		2
3.50								2	17	8		27
3.00							12	54	59	3	2	130
2.50						6	59	218	39	5	3	330
2.00						42	298	279	46	2	1	668
1.60					1	699	1736	383	16	1		2836
1.20					16	34914	3205	70	4			38209
0.80												
0.25			5	22	56	7796	99	10	2	2		8001
-0.25	1			1	8	19	1	1				31
-0.75					2							2
-1.25												
SUM	1		5	23	83	43476	5410	1026	183	23	6	50236
HOURS	708.0											
MILES	83529											

TABLE XLIV

Pitch Rate Peaks in Coincident Pitch Rate and n_z Ranges

PITCH PEAKS FOR PITCH VS NZ														
	4.00	3.50	3.00	2.50	2.00	1.60	1.20	0.80	0.25	-0.25	-0.75	-1.25	LESS	SUM
LESS						1		1	5					5
-25								2	17	1				20
-20							2	4	20	3	1			30
-15						1	4	78	124	2				209
-10														
-5														
5			1	10	50	451	3677	664	14					4867
10			8	70	175	470	388	89	6					1206
15		3	24	58	108	92	56	31	5					377
20	1	2	16	12	12	10	8	2	1					64
25		2	4	4	3	5	6	3	1					28
SUM	1	7	53	154	348	1030	4141	874	198	6	1			6813
HOURS	708.0													
MILES	83529													

TABLE XLV

Maneuver n_z Peaks in Coincident n_z and Pitch Rate Ranges by Mission Segment

NZ MANEUVER PEAKS FOR PITCH VS NZ BY MIS-SEG ASCENT

	LESS	-25	-20	-15	-10	-5	5	10	15	20	25	SUM
2.50												
2.00							2					2
1.60						4	13	6				23
1.20						1283	92					1375
0.80												
0.25				1	2	533						536
-0.25												
SUM				1	2	1820	107	6				1936
HOURS	58.8											
MILES	6233											

NZ MANEUVER PEAKS FOR PITCH VS NZ BY MIS-SEG CRUISE

	LESS	-25	-20	-15	-10	-5	5	10	15	20	25	SUM
2.50												
2.00						2		1				3
1.60						1	3	1				9
1.20						640	24					664
0.80												
0.25						243						243
-0.25												
SUM						890	27	2				919
HOURS	226.6											
MILES	26994											

NZ MANEUVER PEAKS FOR PITCH VS NZ BY MIS-SEG MANUVR

	LESS	-25	-20	-15	-10	-5	5	10	15	20	25	SUM
4.00										2		2
3.50								2	17	8		27
3.00							12	53	57	2		124
2.50						6	55	217	38	3		319
2.00						37	289	269	43	2		640
1.60					1	643	1654	356	15	1		2670
1.20					15	30022	2808	69	4			32918
0.80												
0.25			5	21	51	5966	96	19	2	2		6162
-0.25	1			1	8	17	1	1				29
-0.75					2							2
-1.25												
SUM	1		5	22	77	36691	4915	986	176	20		42893
HOURS	377.7											
MILES	44752											

NZ MANEUVER PEAKS FOR PITCH VS NZ BY MIS-SEG DESCNT

	LESS	-25	-20	-15	-10	-5	5	10	15	20	25	SUM
3.50												
3.00								1	2	1	2	6
2.50							4	1	1	2	3	11
2.00						3	7	9	3		1	23
1.60						47	66	20	1			134
1.20					1	2969	281	1				3252
0.80												
0.25					3	1054	3					1060
-0.25						2						2
-0.75												
SUM					4	4075	361	32	7	3	6	4488
HOURS	44.9											
MILES	5551											

TABLE XLVI

Maneuver n_z Peaks in Coincident n_z and Pitch Rate Ranges
by Gross Weight Range

NZ MANEUVER PEAKS FOR PITCH VS NZ BY WEIGHT LESS												
	LESS	-25	-20	-15	-10	-5	5	10	15	20	25	SUM
4.00								1				1
3.50												
3.00								2				2
2.50								1				1
2.00						1	9	3				13
1.60						31	12					43
1.20												
0.80					1	11						12
0.25												
-0.25					1	43	21	7				72
SUM												
HOURS	0.8											
MILES	112											

NZ MANEUVER PEAKS FOR PITCH VS NZ BY WEIGHT 3500												
	LESS	-25	-20	-15	-10	-5	5	10	15	20	25	SUM
3.00								1				1
2.50							1	1				2
2.00							2	1				3
1.60												
1.20						85	6					91
0.80						23						23
0.25												
-0.25						108	9	3				120
SUM												
HOURS	1.5											
MILES	190											

NZ MANEUVER PEAKS FOR PITCH VS NZ BY WEIGHT 3750												
	LESS	-25	-20	-15	-10	-5	5	10	15	20	25	SUM
4.00										1		1
3.50							3	4	4	1		12
3.00							5	10	3			18
2.50						3	13	28	6			50
2.00						53	96	18				167
1.60						2171	179	5				2355
1.20												
0.80					3	477	3	1				484
0.25					2	1						3
-0.25												
-0.75					5	2705	299	66	13	2		3090
SUM												
HOURS	22.9											
MILES	2756											

NZ MANEUVER PEAKS FOR PITCH VS NZ BY WEIGHT 4000												
	LESS	-25	-20	-15	-10	-5	5	10	15	20	25	SUM
4.00										2		2
3.50									6	3		9
3.00							4	20	23	1	2	50
2.50						14	22	72	12	2	3	111
2.00						201	103	80	14		1	212
1.60						9966	566	119	6			892
1.20					3	978	24	3				10974
0.80												
0.25				2	14	2268	32	4				2320
-0.25					1	5						6
-0.75												
SUM				2	18	12454	1705	319	64	8	6	14576
HOURS	150.7											
MILES	18285											

TABLE XLVI (concluded)

Maneuver n_z Peaks in Coincident n_z and Pitch Rate Ranges
by Gross Weight Range

NZ MANEUVER PEAKS FOR PITCH VS NZ BY WEIGHT 4250												
	LESS	-25	-20	-15	-10	-5	5	10	15	20	25	SUM
4.00												
3.50								1	7	4		12
3.00							4	24	23	1		52
2.50						3	27	107	21	3		161
2.00						20	151	144	19	1		335
1.60					1	352	862	204	9	1		1429
1.20					11	17319	1607	32	1			18970
0.80												
0.25			4	16	31	3542	52	11	2	2		3650
-0.25	1			1	5	7	1					15
-0.75					2							2
-1.25												
SUM	1		4	17	50	21243	2704	523	82	12		24636
HOURS	293.8											
MILES	34905											

NZ MANEUVER PEAKS FOR PITCH VS NZ BY WEIGHT 4500												
	LESS	-25	-20	-15	-10	-5	5	10	15	20	25	SUM
4.00												
3.50									4			4
3.00							1	6	9			16
2.50						3	5	26	3			37
2.00						5	30	25	7	1		68
1.60						91	200	38				330
1.20					2	5144	409	9	1			5564
0.80												
0.25			1	4	6	1357	12	3				1383
-0.25						6		1				7
-0.75												
SUM			1	4	8	6606	657	108	24	1		7409
HOURS	199.9											
MILES	23142											

NZ MANEUVER PEAKS FOR PITCH VS NZ BY WEIGHT 4750												
	LESS	-25	-20	-15	-10	-5	5	10	15	20	25	SUM
2.00												
1.60						1	1					2
1.20						198	14					212
0.80												
0.25					1	110						119
-0.25												
SUM					1	317	15					333
HOURS	38.3											
MILES	4139											

TABLE XLVII

Maneuver n_z Peaks in Coincident n_z and Pitch Rate Ranges
by Altitude Range

NZ MANEUVER PEAKS FOR PITCH VS NZ BY ALTITUDE LESS												
	LESS	-25	-20	-15	-10	-5	5	10	15	20	25	SUM
4.00										1		1
3.50												
3.00								2	9		1	12
2.50						1	3	8	2	1		15
2.00						3	18	9	1			31
1.60						64	125	30	1			220
1.20					1	3055	336	2				3394
0.80												
0.25					4	685	2					691
-0.25						1						1
-0.75												
SUM					5	3809	484	51	13	2	1	4365

HOURS 30.9
MILES 3299

NZ MANEUVER PEAKS FOR PITCH VS NZ BY ALTITUDE 1000												
	LESS	-25	-20	-15	-10	-5	5	10	15	20	25	SUM
4.00										1		1
3.50									6	5		11
3.00							6	14	22	3		45
2.50						1	19	63	13	1		97
2.00						14	88	89	15	1		207
1.60						179	427	101	2	1		710
1.20					5	8846	951	9				9811
0.80												
0.25					11	1690	10					1711
-0.25				1	5	2						8
-0.75					1							1
-1.25												
SUM				1	22	10732	1501	276	58	12		12602

HOURS 108.7
MILES 12447

NZ MANEUVER PEAKS FOR PITCH VS NZ BY ALTITUDE 2000												
	LESS	-25	-20	-15	-10	-5	5	10	15	20	25	SUM
4.00												
3.50								2	7	3		12
3.00							6	29	19		1	55
2.50						4	30	103	18	3	3	161
2.00						23	132	121	24		1	301
1.60					1	295	792	168	13			1269
1.20					7	17231	1382	43	4			18667
0.80												
0.25			5	17	26	4140	54	12		2		4256
-0.25	1				3	14	1	1				20
-0.75												
SUM	1		5	17	37	21707	2397	479	85	8	5	24741

HOURS 347.7
MILES 41155

NZ MANEUVER PEAKS FOR PITCH VS NZ BY ALTITUDE 5000												
	LESS	-25	-20	-15	-10	-5	5	10	15	20	25	SUM
4.00												
3.50									4			4
3.00								9	9			18
2.50							7	44	6			57
2.00						2	59	59				127
1.60						161	392	82		1		635
1.20					3	5729	528	16				6276
0.80												
0.25				5	15	1246	33	7	2			1308
-0.25						2						2
-0.75					1							1
-1.25												
SUM				5	19	7140	1019	217	27	1		8428

HOURS 206.7
MILES 24883

NZ MANEUVER PEAKS FOR PITCH VS NZ BY ALTITUDE 10000												
	LESS	-25	-20	-15	-10	-5	5	10	15	20	25	SUM
2.50												
2.00							1	1				2
1.60								2				2
1.20						53	8					61
0.80												
0.25						35						35
-0.25												
SUM						88	9	3				100

HOURS 14.1
MILES 1747

TABLE XLVIII

Maneuver n_z Peaks in Coincident n_z and Pitch Rate Ranges
by Airspeed Range

NZ MANEUVER PEAKS FOR PITCH VS NZ BY VELOCITY LESS												
	LESS	-25	-20	-15	-10	-5	5	10	15	20	25	SUM
0.80												
0.25			3	13	4	8		1				29
-0.25	1											1
-0.75												
SUM	1		3	13	4	8		1				30
HOURS	0.1											
MILES	7											

NZ MANEUVER PEAKS FOR PITCH VS NZ BY VELOCITY												60
	LESS	-25	-20	-15	-10	-5	5	10	15	20	25	SUM
2.00												
1.60						4	9	2	1			16
1.20						887	156	5				1048
0.80												
0.25			1	5	18	419	27	3		2		475
-0.25						2	1	1				4
-0.75												
SUM			1	5	18	1312	193	11	1	2		1543
HOURS	40.6											
MILES	3686											

NZ MANEUVER PEAKS FOR PITCH VS NZ BY VELOCITY												90
	LESS	-25	-20	-15	-10	-5	5	10	15	20	25	SUM
3.00												
2.50						2		2	4	4	2	12
2.00							9	45	19	2	1	76
1.60					1	147	591	246	13	1		999
1.20					11	19957	2311	58	4			22341
0.80												
0.25			1	4	21	4120	57	8	1			4212
-0.25				1	1	7						9
-0.75					1							1
-1.25												
SUM			1	5	35	24233	2968	357	41	7	3	27650
HOURS	505.6											
MILES	57630											

NZ MANEUVER PEAKS FOR PITCH VS NZ BY VELOCITY												120
	LESS	-25	-20	-15	-10	-5	5	10	15	20	25	SUM
4.00												
3.50										1		1
3.00								3	16	1	2	22
2.50							17	68	24	1	1	111
2.00						13	167	190	26			396
1.60						447	1033	129	1			1619
1.20					2	12989	654	7				13692
0.80												
0.25					12	2884	12	5	1			2914
-0.25					6	5						11
-0.75					1							1
-1.25												
SUM					21	16338	1923	402	68	3	3	18758
HOURS	154.4											
MILES	20991											

NZ MANEUVER PEAKS FOR PITCH VS NZ BY VELOCITY												150
	LESS	-25	-20	-15	-10	-5	5	10	15	20	25	SUM
4.00										2		2
3.50								2	17	7		26
3.00							12	51	43	2		108
2.50						6	42	148	11			207
2.00						27	122	45	1			196
1.60						101	103					211
1.20					3	1081	44		1			1128
0.80												
0.25					1	365	3	2				371
-0.25					1	5						6
-0.75												
SUM					5	1585	326	255	73	11		2255
HOURS	7.3											
MILES	1216											

TABLE XLIX

Maneuver n_z Peaks in Coincident n_z and Pitch Rate Ranges
by Aircraft Configuration

N7 MANEUVER PEAKS FOR PITCH VS n_z BY CONFIG 1												
	LESS	-25	-20	-15	-10	-5	5	10	15	20	25	SUM
3.50												
3.00								1	2			3
2.50							3	3	4	1		11
2.00						3	11	12	4			30
1.60						39	67	34				140
1.20					1	2630	319	7				2937
0.80												
0.25			1	6	5	594	2					608
-0.25						1						1
-0.75												
SUM			1	6	6	3267	402	57	10	1		3730
HOURS	39.9											
MILES	4527											

N2 MANEUVER PEAKS FOR PITCH VS n_z BY CONFIG 2												
	LESS	-25	-20	-15	-10	-5	5	10	15	20	25	SUM
4.00										1		1
3.50								2	10	3		15
3.00							5	31	24	2	1	63
2.50						6	31	114	23	4	3	181
2.00						20	180	172	30	1	1	404
1.60					1	487	1169	218	9	1		1885
1.20					14	24990	1945	35	3			26987
0.80												
0.25			2	7	31	5509	52	11	2	2		5616
-0.25	1			1	6	13	1	1				23
-0.75					1							1
-1.25												
SUM	1		2	8	53	31025	3383	584	101	14	5	35176
HOURS	366.9											
MILES	43573											

N2 MANEUVER PEAKS FOR PITCH VS n_z BY CONFIG 3												
	LESS	-25	-20	-15	-10	-5	5	10	15	20	25	SUM
4.00										1		1
3.50									7	3		10
3.00							3	16	17	1		37
2.50							10	63	4			77
2.00						7	60	42	6			115
1.60						72	209	59	3			343
1.20					1	3242	466	15	1			3725
0.80												
0.25			1	3	2	599	26	4				635
-0.25						2						2
-0.75												
SUM			1	3	3	3922	774	199	38	5		4945
HOURS	45.1											
MILES	5367											

N2 MANEUVER PEAKS FOR PITCH VS n_z BY CONFIG 4												
	LESS	-25	-20	-15	-10	-5	5	10	15	20	25	SUM
3.50												
3.00							1	4	7			12
2.50							7	27	4			38
2.00						2	17	32	3			54
1.60						28	142	29				199
1.20						1206	149	10				1365
0.80												
0.25					2	249	9	4				264
-0.25						2						2
-0.75					1							1
-1.25												
SUM					3	1487	325	106	14			1935
HOURS	14.9											
MILES	1845											

TABLE XLIX (continued)

Maneuver n_z Peaks in Coincident n_z and Pitch Rate Ranges
by Aircraft Configuration

NZ MANEUVER PEAKS FOR PITCH VS NZ BY CONFIG 5												
	LESS	-25	-20	-15	-10	-5	5	10	15	20	25	SUM
4.00												
3.50												
3.00							2	1	4	2	1	2
2.50							1	2	2			8
2.00						1	6	9	1			5
1.60						11	55	13	3			17
1.20						805	118	2				82
0.80												925
0.25			1	5	9	280	3					298
-0.25					2							2
-0.75												
SUM			1	5	11	1047	185	27	10	2	1	1339
HOURS	11.1											
MILES	1305											

NZ MANEUVER PEAKS FOR PITCH VS NZ BY CONFIG 6												
	LESS	-25	-20	-15	-10	-5	5	10	15	20	25	SUM
2.50												
2.00							2	2	1	1		6
1.60						4	21	12				37
1.20						346	38					384
0.80												
0.25					2	171	4					177
-0.25												
SUM					2	521	65	14	1	1		604
HOURS	63.8											
MILES	7209											

NZ MANEUVER PEAKS FOR PITCH VS NZ BY CONFIG 7												
	LESS	-25	-20	-15	-10	-5	5	10	15	20	25	SUM
2.50												
2.00							2	1				3
1.60						1	2	2				5
1.20						178	5					183
0.80												
0.25						105						105
-0.25												
SUM						284	9	3				296
HOURS	15.2											
MILES	1849											

NZ MANEUVER PEAKS FOR PITCH VS NZ BY CONFIG 8												
	LESS	-25	-20	-15	-10	-5	5	10	15	20	25	SUM
2.00												
1.60						1	2					3
1.20						66	7					73
0.80												
0.25						31						31
-0.25												
SUM						98	9					107
HOURS	5.5											
MILES	646											

TABLE XLIX (concluded)

Maneuver n_z Peaks in Coincident n_z and Pitch Rate Ranges
by Aircraft Configuration

NZ MANEUVER PEAKS FOR PITCH VS NZ BY CONFIG 9												
	LESS	-25	-20	-15	-10	-5	5	10	15	20	25	SUM
3.50												
3.00							1		1			2
2.50							5	4	2			11
2.00						6	9	4				19
1.60						51	39	7				97
1.20						1235	119					1354
0.80												
0.25					1	186	1					188
-0.25						1						1
-0.75												
SUM					1	1479	174	15	3			1672
HOURS	135.0											
MILES	15979											

NZ MANEUVER PEAKS FOR PITCH VS NZ BY CONFIG 10												
	LESS	-25	-20	-15	-10	-5	5	10	15	20	25	SUM
3.50												
3.00									3			3
2.50							1	1				2
2.00							9	4				13
1.60						4	21	4				29
1.20						91	18					109
0.80												
0.25					1	38						39
-0.25												
SUM					1	133	49	9	3			195
HOURS	4.0											
MILES	472											

NZ MANEUVER PEAKS FOR PITCH VS NZ BY CONFIG 11												
	LESS	-25	-20	-15	-10	-5	5	10	15	20	25	SUM
3.50												
3.00									1			1
2.50							1	3				4
2.00						1	2					3
1.60							4					4
1.20						49	3	1				63
0.80												
0.25						9						9
-0.25												
SUM						59	20	4	1			84
HOURS	3.7											
MILES	442											

NZ MANEUVER PEAKS FOR PITCH VS NZ BY CONFIG 12												
	LESS	-25	-20	-15	-10	-5	5	10	15	20	25	SUM
3.50												
3.00								1				1
2.50								1				1
2.00						2		1	1			4
1.60						1	5	5	1			12
1.20						76	8					84
0.80												
0.25				1	3	25	2					31
-0.25												
SUM				1	3	104	15	8	2			133
HOURS	2.8											
MILES	313											

TABLE L

Pitch Rate Peaks in Coincident Pitch Rate and n_z Ranges
by Mission SegmentPITCH PEAKS FOR PITCH VS n_z BY MISS. SEG. ASCENT

	4.00	3.50	3.00	2.50	2.00	1.60	1.20	0.80	0.25	-0.25	-0.75	-1.25	LESS	SUM
-25														
-20									1					1
-15									1					1
-10									2					2
-5														
5					1	4	99	23						127
10						6	8	1						15
15														
SUM					1	10	107	24	4					146
HOURS	58.8													
MILES	6233													

PITCH PEAKS FOR PITCH VS n_z BY MISS. SEG. CRUISE

	4.00	3.50	3.00	2.50	2.00	1.60	1.20	0.80	0.25	-0.25	-0.75	-1.25	LESS	SUM
-15														
-10								3	2					5
-5														
5						1	40	6						47
10						1	2	1						4
15														
SUM						2	42	10	2					56
HOURS	226.6													
MILES	26994													

PITCH PEAKS FOR PITCH VS n_z BY MISS. SEG. MANUVR

	4.00	3.50	3.00	2.50	2.00	1.60	1.20	0.80	0.25	-0.25	-0.75	-1.25	LESS	SUM
LESS														
-25								1	5					5
-20								2	16	1				19
-15							2	4	19	3	1			29
-10							4	61	114	2				181
-5														
5				1	9	46	427	515	14					4239
10				8	69	171	441	86	6					1140
15			3	24	57	104	90	31	5					369
20	1	2	15	9	12	9	8	2	1					59
25		2	2	1	2	5	6	3	1					22
SUM	1	7	50	145	335	972	3661	705	186	6	1			6069
HOURS	377.7													
MILES	44752													

PITCH PEAKS FOR PITCH VS n_z BY MISS. SEG. DESCNT

	4.00	3.50	3.00	2.50	2.00	1.60	1.20	0.80	0.25	-0.25	-0.75	-1.25	LESS	SUM
LESS														
-25							1							1
-20														
-15														
-10						1		14	6					21
-5														
5					1	3	19	311	120					454
10					1	4	22	19	1					47
15					1	4	2	1						8
20			1	3	3	1								5
25			2	3	1									6
SUM			3	9	12	46	331	135	6					542
HOURS	44.9													
MILES	5551													

TABLE LI

Pitch Rate Peaks in Coincident Pitch Rate and n_z Ranges
by Gross Weight Range

PITCH PEAKS FOR PITCH VS n_z BY WEIGHT LESS													LESS	SUM
	4.00	3.50	3.00	2.50	2.00	1.60	1.20	0.80	0.25	-0.25	-0.75	-1.25		
-15														
-10										1				1
-5														
5						2	0	1						11
10				2	1	2	1							6
15				1										1
20														
SUM				3	1	4	9	1	1					19
HOURS	0.8													
MILES	112													

PITCH PEAKS FOR PITCH VS n_z BY WEIGHT 3500													LESS	SUM
	4.00	3.50	3.00	2.50	2.00	1.60	1.20	0.80	0.25	-0.25	-0.75	-1.25		
-15														
-10														
-5									1	1				2
5														
10					1	1	10							12
15					1	1								2
20				1										1
SUM				1	2	2	10	1	1					17
HOURS	1.5													
MILES	190													

PITCH PEAKS FOR PITCH VS n_z BY WEIGHT 3750													LESS	SUM
	4.00	3.50	3.00	2.50	2.00	1.60	1.20	0.80	0.25	-0.25	-0.75	-1.25		
-20														
-15														
-10								10	1	9				19
-5														
5				2	2	23	171	45						243
10				7	13	22	19	2						63
15			1	5	9	2	3	2						22
20			3		3									6
25														
SUM			4	14	27	47	193	59	10					354
HOURS	22.9													
MILES	2756													

PITCH PEAKS FOR PITCH VS n_z BY WEIGHT 4000													LESS	SUM
	4.00	3.50	3.00	2.50	2.00	1.60	1.20	0.80	0.25	-0.25	-0.75	-1.25		
LESS														
-25														1
-20						1								1
-15							1	1	2					4
-10						1	1	23	43					68
-5														
5			1	2	20	141	1067	174	5					1410
10			2	22	57	160	112	27	2					382
15			10	19	41	30	21	8						129
20	1		5	5		2	3							16
25		2	4	3	1	2	3	1						16
SUM	1	2	22	51	119	337	1208	235	52					2027
HOURS	150.7													
MILES	18285													

TABLE LI (concluded)

Pitch Rate Peaks in Coincident Pitch Rate and n_z Ranges
by Gross Weight Range

PITCH PEAKS FOR PITCH VS n_z BY WEIGHT 4250															
	4.00	3.50	3.00	2.50	2.00	1.60	1.20	0.80	0.25	-0.25	-0.75	-1.25	LESS	SUM	
LESS									2					2	
-25								1	2					3	
-20								1	19	1				17	
-15							1	1	16	3	1			22	
-10							2	31	55	2				90	
-5															
5				5	23	234	1860	333	6					2461	
10			6	30	88	234	194	43	3					598	
15		3	9	23	48	45	25	13	4					170	
20		2	7	6	8	7	4	2	1					37	
25				1	1	1	1	2	1					7	
SUM		5	22	65	168	521	2087	427	105	6	1			3407	
HOURS	293.8														
MILES	34905														

PITCH PEAKS FOR PITCH VS n_z BY WEIGHT 4500															
	4.00	3.50	3.00	2.50	2.00	1.60	1.20	0.80	0.25	-0.25	-0.75	-1.25	LESS	SUM	
LESS									3					3	
-25									3					3	
-20									2					2	
-15								2	1					3	
-10							1	10	13					24	
-5															
5				1	4	49	544	110	3					711	
10				9	15	51	62	17	1					155	
15			4	9	10	15	7	8	1					54	
20			1	1	1	1	1							5	
25					1	2	2							5	
SUM			5	20	31	118	617	147	27					965	
HOURS	199.9														
MILES	23142														

PITCH PEAKS FOR PITCH VS n_z BY WEIGHT 4750															
	4.00	3.50	3.00	2.50	2.00	1.60	1.20	0.80	0.25	-0.25	-0.75	-1.25	LESS	SUM	
-15															
-10									2					2	
-5															
5						1	17	1						19	
10															
SUM						1	17	4	2					24	
HOURS	38.3														
MILES	4139														

TABLE LII

Pitch Rate Peaks in Coincident Pitch Rate and n_z Ranges
by Altitude Range

PITCH PEAKS FOR PITCH VS NZ BY ALTITUDE														LESS	
	4.00	3.50	3.00	2.50	2.00	1.60	1.20	0.80	0.25	-0.25	-0.75	-1.25	LESS	SUM	
-15															
-10								12	6					18	
-5															
5				1	5	32	383	131						552	
10				6	8	34	28	3						79	
15			4	4	3	2								13	
20			1	1										2	
25		1	1											2	
SUM		1	6	12	16	68	411	146	6					666	
HOURS	30.9														
MILES	3299														
PITCH PEAKS FOR PITCH VS NZ BY ALTITUDE														1000	
	4.00	3.50	3.00	2.50	2.00	1.60	1.20	0.80	0.25	-0.25	-0.75	-1.25	LESS	SUM	
-25															
-20								1						1	
-15									3	3	1			7	
-10								19	28					47	
-5															
5				3	11	97	919	129	1					1160	
10			1	11	38	101	91	4						246	
15			8	16	30	25	5	3						87	
20	1	1	4	3	8	3								22	
25		1	1				1	1						4	
SUM	1	2	16	33	87	226	1016	157	32	3	1			1574	
HOURS	108.7														
MILES	12447														
PITCH PEAKS FOR PITCH VS NZ BY ALTITUDE														2000	
	4.00	3.50	3.00	2.50	2.00	1.60	1.20	0.80	0.25	-0.25	-0.75	-1.25	LESS	SUM	
LESS									5					5	
-25						1		1	4					6	
-20								1	13					14	
-15							2	3	14					19	
-10						1	3	29	60	1				94	
-5															
5			1	3	26	219	1720	296	8					2273	
10			4	37	90	238	194	62	6					631	
15		1	10	27	61	50	44	24	2					219	
20		1	7	5	3	7	7	1	1					32	
25		2	2	4	2	4	4	1	1					18	
SUM		2	24	76	182	520	1974	418	114	1				3311	
HOURS	347.7														
MILES	41155														
PITCH PEAKS FOR PITCH VS NZ BY ALTITUDE														5000	
	4.00	3.50	3.00	2.50	2.00	1.60	1.20	0.80	0.25	-0.25	-0.75	-1.25	LESS	SUM	
LESS															
-25									1					1	
-20								1	4	1				5	
-15									3					4	
-10							1	17	29	1				48	
-5															
5				3	8	101	643	105	5					865	
10			3	16	38	95	75	19						246	
15		2	2	11	14	14	7	4	3					57	
20			2	3	1		1	1						8	
25					1	1	1	1						4	
SUM		2	7	33	62	211	728	148	45	2				1238	
HOURS	206.7														
MILES	24883														
PITCH PEAKS FOR PITCH VS NZ BY ALTITUDE														10000	
	4.00	3.50	3.00	2.50	2.00	1.60	1.20	0.80	0.25	-0.25	-0.75	-1.25	LESS	SUM	
-15															
-10								1	1					2	
-5															
5						2	12	3						17	
10					1	2		1						4	
15						1								1	
20															
SUM					1	5	12	5	1					24	
HOURS	14.1														
MILES	1747														

TABLE LIII

Pitch Rate Peaks in Coincident Pitch Rate and n_z Ranges
by Airspeed Range

PITCH PEAKS FOR PITCH VS n_z BY VELOCITY LESS														SUM
	4.00	3.50	3.00	2.50	2.00	1.60	1.20	0.80	0.25	-0.25	-0.75	-1.25	LESS	
LESS									3					3
-25									4					4
-20									11					11
-15								1	4					5
-10								1	4					5
-5								4	1					5
5														
10														
15									2					2
20														
SUM								6	29					35
HOURS	0.1													
MILES	7													
PITCH PEAKS FOR PITCH VS n_z BY VELOCITY 60														SUM
	4.00	3.50	3.00	2.50	2.00	1.60	1.20	0.80	0.25	-0.25	-0.75	-1.25	LESS	
LESS									1					1
-25									1					2
-20									5					6
-15								2	10					12
-10								22	23					45
-5														
5						4	232	121	4					361
10						4	39	25	5					73
15							9	10						19
20						1	1		1					3
25							1		1					2
SUM						9	282	182	51					524
HOURS	40.6													
MILES	3686													
PITCH PEAKS FOR PITCH VS n_z BY VELOCITY 90														SUM
	4.00	3.50	3.00	2.50	2.00	1.60	1.20	0.80	0.25	-0.25	-0.75	-1.25	LESS	
LESS									1					1
-25						1								1
-20								1	1	1				3
-15							2	3	3	2				7
-10						1	4	40	73					118
-5														
5				1	4	156	2382	491	6					2980
10				2	20	258	276	58	1					615
15				2	22	75	41	16	2					158
20					7	8	5							20
25				3	2	4	3	3						15
SUM				8	55	503	2713	549	87	3				3918
HOURS	505.6													
MILES	57630													
PITCH PEAKS FOR PITCH VS n_z BY VELOCITY 120														SUM
	4.00	3.50	3.00	2.50	2.00	1.60	1.20	0.80	0.25	-0.25	-0.75	-1.25	LESS	
-20														
-15								1	3	1	1			6
-10								13	21	2				36
-5														
5				4	18	233	1002	100	2					1359
10			1	11	110	190	68	6						386
15			5	23	70	15	5	5	1					124
20			3	9	2	1	2	2						19
25		1	2	1	1	1	2							8
SUM		1	11	48	201	440	1079	127	27	3	1			1938
HOURS	154.6													
MILES	20991													
PITCH PEAKS FOR PITCH VS n_z BY VELOCITY 150														SUM
	4.00	3.50	3.00	2.50	2.00	1.60	1.20	0.80	0.25	-0.25	-0.75	-1.25	LESS	
-15														
-10								2	3					5
-5														
5			1	5	28	58	61	8	1					162
10			7	57	45	18	5							132
15		3	19	33	16	2	1							74
20	1	2	13	3	3									22
25		1	2											3
SUM	1	6	42	98	92	78	67	10	4					398
HOURS	7.3													
MILES	1216													

TABLE LIV

Pitch Rate Peaks in Coincident Pitch Rate and n_z Ranges
by Aircraft ConfigurationPITCH PEAKS FOR PITCH VS n_z BY CONFIGURATN 1

	4.00	3.50	3.00	2.50	2.00	1.60	1.20	0.80	0.25	-0.25	-0.75	-1.25	LESS	SUM
LESS														
-25									1					1
-20									3					3
-15									6					6
-10								3	10					13
-5														
5				2	4	23	274	64						367
10				3	3	29	25	2						59
15				3	7	7	4	1						22
20			1	1	2	1								5
25														
SUM			1	6	16	60	303	70	20					476
HOURS	39.9													
MILES	4527													

PITCH PEAKS FOR PITCH VS n_z BY CONFIGURATN 2

	4.00	3.50	3.00	2.50	2.00	1.60	1.20	0.80	0.25	-0.25	-0.75	-1.25	LESS	SUM
LESS														
-25						1			2					2
-20								1	4					1
-15							2	2	8	3	1			5
-10						1	3	41	73	2				16
-5														120
5				4	28	289	2414	399	9					3143
10			5	40	96	277	226	51	4					499
15		2	8	31	62	52	28	11	4					199
20		1	7	8	7	7	6	2	1					39
25		1	1	4	1	4	3	2	1					17
SUM		4	22	87	194	631	2682	909	106	5	1			4241
HOURS	366.9													
MILES	43573													

PITCH PEAKS FOR PITCH VS n_z BY CONFIGURATN 3

	4.00	3.50	3.00	2.50	2.00	1.60	1.20	0.80	0.25	-0.25	-0.75	-1.25	LESS	SUM
LESS														
-25									3					3
-20									3					1
-15								1	1					2
-10								12	16					28
-5														
5			1	1	5	63	420	86	3					579
10			2	15	49	70	66	24						226
15		1	9	16	22	18	16	14	1					97
20	1	1	5	1	1		1							10
25			2				2	1						5
SUM	1	2	19	33	77	151	505	138	28					954
HOURS	45.1													
MILES	5367													

PITCH PEAKS FOR PITCH VS n_z BY CONFIGURATN 4

	4.00	3.50	3.00	2.50	2.00	1.60	1.20	0.80	0.25	-0.25	-0.75	-1.25	LESS	SUM
-25														
-20										1				1
-15														
-10								3	3					6
-5														
5				1	4	23	148	27	1					204
10			1	13	15	51	27	5						112
15			2	4	11	5	6	4						32
20			1	1	1	1	1							4
25					1									1
SUM			4	9	31	80	182	39	4	1				360
HOURS	14.9													
MILES	1845													

TABLE LIV (continued)

Pitch Rate Peaks in Coincident Pitch Rate and n_z Ranges
by Aircraft Configuration

PITCH PEAKS FOR PITCH VS n_z BY CONFIGURATN 5

	4.00	3.50	3.00	2.50	2.00	1.50	1.20	0.80	0.25	-0.25	-0.75	-1.25	LESS	SUM
LESS														
-25									1	1				1
-20									7					7
-15									4					4
-10								11	10					21
-5														
5					1	9	127	32	1					170
10				2	6	12	17	2	1					40
15			3	2	2	2	1							10
20			1											1
25		1	1											1
SUM		1	5	4	9	23	145	46	24					257
HOURS	11.1													
MILES	1305													

PITCH PEAKS FOR PITCH VS n_z BY CONFIGURATN 6

	4.00	3.50	3.00	2.50	2.00	1.50	1.20	0.80	0.25	-0.25	-0.75	-1.25	LESS	SUM
-15														
-10								1	1	5				7
-5														
5						8	49	5						62
10					2	5	8	1						16
15					1	3								4
20					1									1
25						1								1
SUM					4	17	58	7	5					91
HOURS	63.8													
MILES	7209													

PITCH PEAKS FOR PITCH VS n_z BY CONFIGURATN 7

	4.00	3.50	3.00	2.50	2.00	1.50	1.20	0.80	0.25	-0.25	-0.75	-1.25	LESS	SUM
-15														
-10								2	2					4
-5														
5						2	14	3						19
10					1	3								4
15														
SUM					1	5	14	5	2					27
HOURS	15.2													
MILES	1849													

PITCH PEAKS FOR PITCH VS n_z BY CONFIGURATN 8

	4.00	3.50	3.00	2.50	2.00	1.50	1.20	0.80	0.25	-0.25	-0.75	-1.25	LESS	SUM
-15														
-10								1						1
-5														
5						1	6	2						9
10						1								1
15														
SUM						2	6	3						11
HOURS	5.5													
MILES	646													

TABLE LIV (concluded)

Pitch Rate Peaks in Coincident Pitch Rate and n_z Ranges
by Aircraft ConfigurationPITCH PEAKS FOR PITCH VS n_z BY CONFIGURATI. 9

	4.00	3.50	3.00	2.50	2.00	1.50	1.20	0.80	0.25	-0.25	-0.75	-1.25	LESS	SUM
-15														
-10								3	1					4
-5														
5				2	6	15	173	21						217
10					1	11	11	4						27
15					1	3	1							5
20					1									1
25					1									1
SUM				2	10	29	185	28	1					255
HOURS	135.0													
MILES	15979													

PITCH PEAKS FOR PITCH VS n_z BY CONFIGURATN 10

	4.00	3.50	3.00	2.50	2.00	1.50	1.20	0.80	0.25	-0.25	-0.75	-1.25	LESS	SUM
-15														
-10									1					1
-5														
5					2	15	26	8						51
10					2	6	6							14
15			1	1	1	1								4
20			1											1
25							1							1
SUM			2	1	5	22	33	8	1					72
HOURS	4.0													
MILES	472													

PITCH PEAKS FOR PITCH VS n_z BY CONFIGURATN 11

	4.00	3.50	3.00	2.50	2.00	1.50	1.20	0.80	0.25	-0.25	-0.75	-1.25	LESS	SUM
-5														
5						2	14	5						21
10						1	2							3
15														
20				1										1
25														
SUM				1		3	16	5						25
HOURS	3.7													
MILES	442													

PITCH PEAKS FOR PITCH VS n_z BY CONFIGURATN 12

	4.00	3.50	3.00	2.50	2.00	1.50	1.20	0.80	0.25	-0.25	-0.75	-1.25	LESS	SUM
LESS														
-25								1						1
-20									2					2
-15								1	1					2
-10								1	3					4
-5														
5						1	12	12						25
10						4			1					5
15				1	1	1		1						4
20						1								1
25														
SUM				1	1	7	12	16	7					44
HOURS	2.8													
MILES	313													

TABLE LV

Weapons Pass Data Ordered by Record Number
and Sequence of Pass

02A WEAPONS PASSES

FLT	A/C	TAIL	TP	SEQ	DN	ENC	EXC	TIME	NZ	WGT	NZ(W)	DVE	VE	DALT	ALT	MACH	PCIF	DANG	CANG	ROLL	PITCH
01A	04	847	1	1	2	2	2	39.8	3.0	4414	13382	68	167	764	2229	0.26	86	21	17	12	13
01A	04	847	1	2	2	2	2	42.9	3.2	4388	14184	61	155	582	1721	0.24	95	27	10	-6	16
18A	04	847	1	1	2	2	2	92.5	2.1	4310	9108	52	145	534	2129	0.23	72	34	5	5	8
18A	04	847	1	2	2	2	2	94.0	2.7	4288	11598	50	147	456	1818	0.23	72	11	9	1	12
18A	04	847	1	3	2	2	2	97.1	2.5	4263	10727	67	150	719	1828	0.23	71	29	10	4	11
18A	04	847	1	4	2	2	2	98.0	2.4	4243	10168	41	123	361	1937	0.19	71	16	4	3	10
18A	04	847	1	5	2	2	3	100.6	2.9	4220	12280	77	166	817	1651	0.26	70	30	9	2	12
19A	04	847	1	1	2	2	2	42.6	2.4	4407	10709	47	149	705	1516	0.23	85	30	6	-3	11
19A	04	847	1	2	2	2	2	48.8	2.7	4373	11645	44	155	753	1444	0.24	83	29	10	1	11
19A	04	847	1	3	2	2	2	57.6	3.0	4333	13144	36	172	953	2592	0.27	80	27	11	10	13
19A	04	847	1	4	2	2	3	60.3	3.4	4308	14664	57	181	1020	2196	0.29	79	36	10	16	15
19A	04	847	1	5	2	3	3	62.6	3.4	4285	14696	62	168	984	1757	0.26	79	37	10	4	16
19A	04	847	1	6	2	3	3	64.8	2.9	4261	12412	41	146	601	1229	0.23	78	34	11	2	14
19A	04	847	1	7	2	3	3	107.1	3.0	4137	12408	61	181	1314	1927	0.28	63	33	16	-1	11
19A	04	847	1	8	2	3	3	111.1	2.6	4109	10801	37	147	675	1253	0.23	62	17	5	17	11
19A	04	847	1	9	2	3	4	111.9	2.5	4071	10070	48	143	718	1039	0.22	62	28	14	2	11
19A	04	847	1	10	2	4	4	172.6	2.8	3902	10995	40	150	662	1806	0.23	41	20	12	7	13
19A	04	847	1	11	2	4	4	176.3	3.1	3874	12053	56	161	971	2246	0.25	40	28	9	13	14
19A	04	847	1	12	2	4	4	176.8	3.8	3855	14717	61	164	738	1879	0.26	40	25	21	-8	21
20A	04	973	1	1	2	2	2	30.1	2.6	4496	11475	50	139	513	6602	0.24	91	21	11	5	11
20A	04	973	1	2	2	2	2	32.3	3.6	4473	16259	59	157	786	5847	0.26	90	35	26	-4	19
20A	04	973	1	3	2	2	2	34.4	3.0	4468	13321	47	150	594	5474	0.25	90	33	14	-3	15
20A	04	973	1	4	2	2	3	37.4	3.0	4444	13203	28	157	589	5227	0.26	89	15	27	-20	16
20A	04	973	1	5	2	3	3	39.5	2.6	4421	11374	53	147	593	5443	0.25	88	18	15	-7	12
20A	04	973	1	6	2	3	3	41.8	3.0	4398	13157	59	146	625	5536	0.24	87	23	31	-1	15
20A	04	973	1	7	2	3	3	56.3	2.6	4348	11498	53	143	626	5567	0.24	83	21	15	-6	12
20A	04	973	1	8	2	3	3	60.3	2.7	4321	11647	38	141	465	5258	0.24	82	25	15	-15	14
20A	04	973	1	9	2	3	3	67.3	2.9	4288	12258	56	137	620	5196	0.23	80	35	6	12	13
20A	04	973	1	10	2	3	4	144.7	2.9	4100	11887	60	160	787	5910	0.27	57	26	13	-5	12
20A	04	973	1	11	2	4	4	204.5	2.7	3950	10485	56	153	653	2326	0.24	39	21	14	5	11
20A	04	973	1	12	2	4	4	208.1	2.5	3924	9735	35	136	397	2354	0.22	37	16	15	5	13
20A	04	973	1	13	2	4	4	220.9	3.0	3878	11720	63	134	622	2186	0.21	34	28	19	-1	16
21A	04	973	1	1	2	2	2	74.1	2.8	4414	12483	73	162	893	4860	0.27	80	27	17	1	12
21A	04	973	1	2	2	2	2	78.2	2.8	4388	12409	51	151	574	4438	0.25	79	27	10	8	14
21A	04	973	1	3	2	2	2	103.8	3.3	4318	14109	56	169	749	5350	0.28	72	27	12	-6	14
21A	04	973	1	4	2	2	3	105.1	2.9	4298	12462	54	152	681	5135	0.25	71	24	12	-4	14
21A	04	973	1	5	2	3	3	109.6	2.8	4271	11816	50	134	766	4739	0.22	70	32	17	-7	16
21A	04	973	1	6	2	3	3	126.4	3.3	4219	14001	71	166	950	4679	0.27	65	28	19	-11	16
21A	04	973	1	7	2	3	3	128.7	2.7	4197	11268	51	140	549	4709	0.23	65	22	35	-13	14
21A	04	973	1	8	2	3	3	133.8	2.9	4168	12001	52	149	575	4498	0.24	63	28	16	-6	14
21A	04	973	1	9	2	3	3	138.6	3.5	4141	14417	67	160	877	4289	0.26	62	28	12	-15	18
21A	04	973	1	10	2	3	3	170.6	3.3	4059	13510	74	155	773	5043	0.26	53	35	11	-5	16
21A	04	973	1	11	2	3	4	171.6	2.9	4039	11835	69	150	828	4769	0.25	53	34	10	-11	14
25A	04	973	1	1	2	2	2	88.0	3.7	4386	16053	84	161	799	1551	0.25	76	26	11	17	21
25A	04	973	1	2	2	2	2	90.8	3.7	4344	16118	62	162	749	1769	0.25	75	16	12	-6	22
25A	04	973	1	3	2	2	2	94.7	3.6	4319	15590	61	162	643	2100	0.25	74	22	13	19	22
25A	04	973	1	4	2	2	3	98.0	3.9	4294	16918	77	167	817	2378	0.26	73	25	13	4	22
25A	04	973	1	5	2	3	3	99.6	3.3	4273	14058	58	159	564	2518	0.25	73	20	11	10	19
25A	04	973	1	6	2	3	3	102.0	3.6	4250	15342	77	178	815	2239	0.28	72	24	9	3	19
25A	04	973	1	7	2	3	3	205.6	3.4	4025	13564	64	153	805	1769	0.24	44	33	7	-15	21
26A	04	973	1	1	2	2	2	50.0	3.3	4449	14771	62	160	1113	5260	0.27	87	28	8	9	17
36A	04	847	2	1	2	9	9	23.1	2.5	4606	11672	80	172	954	1763	0.27	89	22	17	-1	9
36A	04	847	1	2	2	9	9	24.9	2.8	4573	12731	76	168	878	1691	0.26	88	25	14	0	11
36A	04	847	2	3	2	9	9	32.5	3.0	4530	13623	36	153	466	2054	0.24	85	18	19	-3	16
36A	04	847	1	4	2	9	10	34.3	2.8	4496	12439	42	140	465	2005	0.22	84	16	9	-26	9
36A	04	847	1	5	2	10	10	36.5	2.5	4471	11097	53	143	586	1884	0.22	83	18	14	3	11
36A	04	847	2	6	2	10	10	38.2	3.1	4447	13797	40	155	416	2029	0.24	82	15	17	-6	17
36A	04	847	2	7	2	10	11	40.9	3.2	4411	13989	36	138	439	1908	0.22	81	5	8	-10	18
36A	04	847	1	8	2	11	12	42.2	3.0	4380	13059	44	143	391	1957	0.22	80	16	6	-25	14
37A	04	847	1	1	1	9	9	27.3	2.4	4576	10766	41	138	446	2435	0.22	85	20	9	-2	11
37A	04	847	1	2	1	9	10	30.4	2.3	4545	10499	82	171	937	2044	0.27	83	22	13	-1	8
37A	04	847	1	3	1	10	10	31.2	2.4	4524	10996	44	141	709	1874	0.22	83	22	14	-9	10
48A	04	973	1	1	2	2	2	178.1	2.5	4241	10785	59	154	825	3108	0.25	56	21	12	2	12
49A	04	973	1	1	2	2	2	113.0	2.4	4302	10187	49	128	492	2595	0.20	64	19	9	5	11
49A	04	973	1	2	2	2	2	114.8	1.6	4262	6980	27	112	319	2710	0.18	64	13	5	8	6
49A	04	973	1	3	2	2	2	161.7	2.8	4136	11411	60	152	910	2971	0.24	49	26	11	-7	14
49A	04	973	1	4	2	2	3	163.8	2.1	4113	8725	58	134	586	3087	0.21	49	16	5	9	11
49A	04	973	1	5	2	3	3	171.3	2.7	4060	10783	36	157	719	3614	0.25	46	24	5	0	11
49A	04	973	1	6	2	3	3	176.0	3.1	4031	12365	55	155	710	3261	0.25	45	25	4	9	12
49A	04	973	1	7	2	3	3	182.3	1.8	3981	7215	20	144	494	2913	0.23	43	17	6	-1	6
49A	04	973	1	8	2	3	5	217.5	3.4	3882	13185	72	150	960	4484	0.25	32	31	15	13	18
59A	04	48	1	1	2	2	2														

TABLE LV (continued)

Weapons Pass Data Ordered by Record Number
and Sequence of Pass

02A WEAPONS PASSES

FLT	A/C	TAIL	YP	SFG	DN	ENC	EXC	TIME	NZ	WGT	NZ(N)	DVE	VE	DALT	ALT	MACH	PCIF	DANG	CANG	ROLL	PITCH
68A	04	48	1	4	2	2	2	103.8	2.8	4231	11941	50	140	390	2056	0.22	69	28	13	-13	14
68A	04	48	1	5	2	2	2	105.4	2.8	4209	11627	55	139	471	1862	0.22	68	24	17	1	14
72A	04	856	1	1	2	2	2	70.1	1.9	4418	8492	38	151	512	6282	0.24	77	7	5	2	5
72A	04	856	1	2	2	2	2	77.4	2.1	4382	9321	21	104	257	6505	0.18	75	9	6	30	15
72A	04	856	1	3	2	2	3	82.3	1.7	4352	7326	28	111	223	6345	0.19	73	8	3	17	10
72A	04	856	1	4	2	3	3	86.1	1.7	4307	7348	30	129	192	6473	0.22	72	6	6	-2	-0
72A	04	856	1	5	2	3	3	91.3	2.1	4277	8097	33	131	350	6250	0.22	70	9	8	-13	9
72A	04	856	1	6	2	3	3	92.5	2.0	4256	8471	31	126	191	6377	0.21	70	6	9	23	14
72A	04	856	1	7	2	3	4	95.7	2.2	4212	9200	22	141	191	6282	0.24	69	6	7	-29	10
72A	04	856	1	8	2	4	5	97.6	2.7	4172	11391	33	138	447	6282	0.23	68	13	5	9	13
75A	04	48	1	1	2	2	2	48.5	2.6	4382	11272	47	163	557	1945	0.24	80	31	7	5	13
75A	04	48	1	2	2	2	2	51.4	2.6	4322	11246	55	162	690	1588	0.25	79	31	13	0	11
75A	04	48	1	3	2	2	2	52.9	2.4	4301	10114	29	148	471	1835	0.23	78	27	3	-10	12
75A	04	48	1	4	2	2	2	55.6	2.3	4277	9887	45	150	716	1534	0.23	78	29	7	-9	11
75A	04	48	1	5	2	2	3	92.7	3.0	4177	12417	72	191	1118	1807	0.30	66	33	15	-1	10
75A	04	48	1	6	2	3	3	94.2	2.6	4156	10939	56	150	809	1890	0.24	66	25	9	-9	14
75A	04	48	1	7	2	3	3	99.3	3.5	4127	12492	81	189	1239	2083	0.30	64	34	15	8	12
75A	04	48	1	8	2	3	3	100.7	3.0	4105	12492	57	150	829	1588	0.25	64	35	9	3	13
77A	04	48	1	1	2	2	2	112.6	3.0	4328	12909	74	170	972	2547	0.27	72	34	21	10	13
77A	04	48	1	2	2	2	2	117.0	2.4	4302	10172	71	174	1019	2097	0.27	71	33	19	0	9
77A	04	48	1	3	2	2	2	121.6	2.9	4276	12544	76	189	1325	2632	0.30	70	37	12	2	11
77A	04	48	1	4	2	2	3	123.8	2.8	4254	12020	87	185	1263	1626	0.29	70	38	16	6	11
77A	04	48	1	5	2	3	3	125.0	3.2	4234	13376	74	154	865	1626	0.24	69	38	14	-10	17
77A	04	48	1	6	2	3	3	128.6	2.9	4210	12059	76	183	1365	2125	0.29	68	32	16	-3	12
77A	04	48	1	7	2	3	3	141.0	2.9	4169	12107	75	174	1082	2321	0.28	65	35	18	2	13
77A	04	48	1	8	2	3	3	146.1	2.1	4142	8858	43	135	563	2097	0.21	64	26	9	-3	9
77A	04	48	1	9	2	3	3	147.2	1.7	4122	7035	46	130	481	2293	0.20	64	27	12	0	6
77A	04	48	1	10	2	3	4	148.2	3.2	4102	13040	75	157	873	1930	0.25	64	39	22	-5	16
77A	04	48	1	11	2	4	4	148.5	3.2	4066	13044	70	158	807	1571	0.25	63	34	26	5	16
77A	04	48	1	12	2	4	5	148.8	3.6	4029	14508	51	140	657	1162	0.22	63	37	22	-21	23
79A	04	48	1	1	2	2	2	95.1	3.5	4284	15005	60	166	701	1865	0.26	66	30	14	-2	17
79A	04	48	1	2	2	2	2	96.2	3.1	4263	13425	61	150	696	1671	0.23	66	32	16	-6	17
79A	04	48	1	3	2	2	2	100.1	3.0	4235	12880	55	158	809	1671	0.25	64	32	22	5	15
79A	04	48	1	4	2	2	3	109.3	2.5	4193	10324	38	148	504	1920	0.23	61	17	19	-6	11
79A	04	48	1	5	2	3	3	110.5	2.5	4172	10395	42	140	648	2059	0.22	61	27	13	-4	12
79A	04	48	1	6	2	3	3	111.4	3.7	4151	15560	42	164	584	1671	0.25	60	32	14	-5	21
79A	04	48	1	7	2	3	3	113.1	3.1	4129	12963	65	164	647	2004	0.26	60	27	12	-4	13
79A	04	48	1	8	2	3	3	115.5	2.2	4105	9100	48	136	541	2594	0.22	59	31	9	-1	9
79A	04	48	1	9	2	3	3	118.2	3.3	4080	13289	60	172	652	2255	0.27	58	23	13	-2	14
88A	04	847	1	1	2	2	2	116.6	3.1	4456	13923	59	162	863	1893	0.25	65	22	10	4	13
88A	04	847	1	2	2	2	2	120.1	2.5	4431	10883	27	137	371	2236	0.22	64	21	7	5	10
88A	04	847	1	3	2	2	2	125.1	2.9	4402	12459	50	150	662	1820	0.23	62	18	9	2	14
88A	04	847	1	4	2	2	2	126.3	2.4	4381	10348	34	142	557	1458	0.22	62	15	6	3	11
88A	04	847	1	5	2	2	3	129.0	2.8	4357	12381	41	143	368	1991	0.22	61	17	9	0	12
88A	04	847	1	6	2	3	3	131.4	2.4	4334	10311	48	149	512	1699	0.23	61	23	9	0	10
88A	04	847	1	7	2	3	3	132.7	2.8	4313	12219	63	157	826	1434	0.24	60	28	14	7	12
88A	04	847	1	8	2	3	3	141.1	2.1	4277	9075	63	151	736	1772	0.24	58	23	3	2	7
88A	04	847	1	9	2	3	4	143.4	2.3	4254	9755	72	166	941	1172	0.26	57	20	14	6	7
88A	04	847	1	10	2	4	4	147.1	2.8	4227	11795	54	151	935	1772	0.24	56	26	14	1	17
90A	04	48	1	1	2	2	2	133.1	2.4	4198	9884	66	143	708	2199	0.23	55	28	5	-5	10
90A	04	48	1	2	2	2	2	134.1	2.5	4178	10574	61	142	674	1920	0.22	54	26	8	6	12
90A	04	48	1	3	2	2	3	135.4	2.5	4139	10272	56	143	674	1948	0.22	54	28	9	1	11
90A	04	48	1	4	2	3	3	136.7	2.5	4117	10219	58	165	588	1865	0.26	53	23	14	-3	9
90A	04	48	1	5	2	3	3	139.0	2.8	4094	11285	60	157	706	2087	0.25	53	28	17	-0	13
90A	04	48	1	6	2	3	3	140.0	2.4	4073	9829	65	161	679	2171	0.25	52	24	5	39	8
90A	04	48	1	7	2	3	3	142.0	2.5	4050	10012	56	148	707	2143	0.23	52	28	7	-1	11
90A	04	48	1	8	2	3	3	143.1	2.8	4029	11108	64	169	677	2059	0.27	51	28	18	-4	12
90A	04	48	1	9	2	3	3	144.2	2.5	4009	10067	59	161	679	2199	0.25	51	23	17	4	10
90A	04	48	1	10	2	3	4	145.9	2.6	3986	10442	50	152	627	2594	0.24	50	27	5	23	13
92A	04	973	1	1	2	2	2	31.0	3.3	4497	14673	66	170	1126	3892	0.28	91	34	6	-3	16
92A	04	973	1	2	2	2	3	35.7	2.7	4451	11959	51	155	863	3360	0.25	90	30	4	-6	14
92A	04	973	1	3	2	3	3	49.5	3.8	4386	16522	66	182	1322	4102	0.30	86	25	10	3	18
92A	04	973	1	4	2	3	3	111.3	2.9	4202	12155	56	164	1046	1444	0.25	68	30	4	7	15
92A	04	973	1	5	2	3	4	112.9	2.5	4163	10200	43	152	866	1167	0.23	68	24	6	-3	11
92A	04	973	1	6	2	4	4	116.2	3.1	4120	12595	52	161	906	1555	0.25	67	29	6	9	15
92A	04	973	1	7	2	4	5	247.0	3.5	3827	13354	55	161	900	1333	0.25	29	26	4	5	19
95A	04	856	1	1	2	2	2	70.8	3.5	4246	14931	65	212	1340	2683	0.34	54	19	15	2	14
95A	04	856	1	2	2	2	2	80.9	2.8	4209	11637	57	188	1126	2482	0.30	51	7	19	5	11
95A	04	856	1	3	2	2	2	82.4	2.7	4152	11102	90	180	1069	2940	0.29	51	9	5	-10	12
97A	04	856	1	1	2	2	2	259.6	1.7	4093	7075	18	126	164	7049	0.22	33	4	2	4	7
97A	04	856	1	2	2	2	2	260.6	2.0	4073	8244	21	123	229	7004	0.21	32	13	2	-9	8
97A	04	856	1	3	2	2	2	261.3	1.8	4054	7468	9	107	33	7037	0.18					

TABLE LV (continued)

Weapons Pass Data Ordered by Record Number
and Sequence of Pass

OZA WEAPONS PASSES																			
FLT	A/C	TAIL	TP	SEG	DN	ENC	EXC	TIME	NZ	WGT	NZ(W)	DVE	VE	DALT	ALT	MACH	PCIF	DANG	CANG
46B	04	847	1	6	2	3	3	126.7	2.7	4175	11334	60	179	880	1927	0.28	64	22	23
46B	04	847	1	7	2	3	3	128.5	2.4	4153	10165	65	166	730	1865	0.26	63	22	17
46B	04	847	1	8	2	3	3	130.3	2.6	4131	10753	61	161	735	2058	0.25	63	23	8
46B	04	847	1	9	2	3	3	131.7	2.5	4110	10167	51	165	613	2179	0.26	62	18	8
46B	04	847	1	10	2	3	4	133.6	2.7	4088	11099	53	161	708	1985	0.25	61	22	19
66B	04	847	1	1	2	2	2	75.8	3.4	4326	14802	86	182	1126	1093	0.28	72	32	10
66B	04	847	1	2	2	2	2	78.1	3.0	4302	12791	75	166	1077	1093	0.26	71	26	11
66B	04	847	1	3	2	2	2	82.6	3.8	4272	16272	64	177	1038	1377	0.27	70	32	14
66B	04	847	1	4	2	2	3	104.8	2.3	4194	9579	51	151	914	1329	0.23	61	26	7
66B	04	847	1	5	2	3	3	106.7	3.3	4171	13623	74	165	1101	1069	0.25	61	34	8
66B	04	847	1	1	2	2	2	180.5	2.7	4152	11093	59	159	690	2243	0.25	48	22	5
79B	04	973	1	1	2	2	2	54.8	2.5	4463	11337	56	189	1142	3525	0.31	87	22	6
79B	04	973	1	2	2	2	2	59.5	2.7	4437	12068	64	173	1044	4181	0.28	85	21	13
79B	04	973	1	3	2	2	2	69.2	2.1	4401	9287	78	184	1174	3555	0.30	83	18	7
79B	04	973	1	4	2	2	3	151.1	3.1	4236	13343	57	144	774	883	0.22	63	32	11
79B	04	973	1	5	2	3	3	156.0	3.0	4209	12501	54	161	789	1461	0.25	62	23	16
79B	04	973	1	6	2	3	3	163.8	4.3	4159	17843	81	167	960	1434	0.26	60	33	13
80B	04	973	1	1	2	2	2	53.2	2.2	4466	9692	75	169	918	4151	0.28	87	16	6
80B	04	973	1	2	2	2	2	58.0	2.8	4440	12608	66	167	1079	3467	0.27	86	26	10
80B	04	973	1	3	2	2	2	60.6	2.5	4417	10998	61	159	781	3673	0.26	85	17	11
80B	04	973	1	4	2	2	3	85.9	2.8	4353	12320	76	181	1025	3675	0.29	79	24	10
80B	04	973	1	5	2	3	3	87.2	2.6	4333	11136	58	157	725	3851	0.25	79	19	12
80B	04	973	1	6	2	3	3	91.6	3.0	4307	12878	75	178	918	4151	0.29	77	18	9
80B	04	973	1	7	2	3	3	94.1	2.9	4285	12297	68	177	1105	4151	0.29	77	23	11
80B	04	973	1	8	2	3	4	223.8	2.3	4033	9155	60	153	668	2682	0.24	45	13	11
81B	04	973	1	1	2	2	2	54.8	2.8	4480	12633	60	152	764	5666	0.26	89	21	11
81B	04	973	1	2	2	2	2	56.3	2.5	4460	11372	62	147	668	5603	0.25	88	20	13
82B	04	973	1	1	2	2	2	149.5	3.2	4185	13287	67	145	749	1413	0.23	51	35	15
84B	04	973	1	1	2	2	2	55.5	2.7	4626	12557	81	162	1398	6594	0.28	86	28	21
84B	04	973	1	2	2	2	3	67.4	2.0	4587	9304	59	152	1065	5592	0.25	83	24	3
84B	04	973	1	3	2	3	3	68.5	2.0	4567	9309	65	154	844	4286	0.25	83	28	6
85B	04	973	1	1	2	2	2	51.0	2.6	4629	11975	74	165	930	4107	0.27	87	25	10
85B	04	973	1	2	2	2	2	57.5	3.7	4599	16987	85	169	909	3464	0.27	85	24	17
92B	04	847	1	1	2	2	2	116.1	2.6	4299	11267	48	155	619	2069	0.24	68	22	6
92B	04	847	1	2	2	2	2	117.6	2.7	4278	11472	49	153	496	2192	0.24	68	22	7
92B	04	847	1	3	2	2	2	118.6	3.0	4258	12821	55	161	594	2045	0.25	68	24	6
92B	04	847	1	4	2	2	3	121.2	2.3	4235	9704	46	156	567	1922	0.24	67	14	11
92B	04	847	1	5	2	3	3	122.2	2.2	4215	9366	47	165	539	1776	0.26	67	19	7
92B	04	847	1	6	2	3	3	123.0	2.2	4195	9432	54	162	636	1631	0.25	66	12	13
92B	04	847	1	7	2	3	3	125.1	2.5	4173	10358	53	153	720	2094	0.24	66	27	11
92B	04	847	1	8	2	3	3	126.6	2.9	4152	12178	59	153	770	2069	0.24	65	34	6
03C	04	847	1	1	2	2	2	99.3	2.5	4258	10570	52	164	700	2405	0.26	63	20	9
03C	04	847	1	2	2	2	2	106.3	2.8	4224	11922	47	177	797	2207	0.28	60	23	13
03C	04	847	1	3	2	2	2	107.4	2.6	4203	11131	40	167	522	2231	0.26	60	22	2
03C	04	847	1	4	2	2	2	106.5	2.1	4182	8742	36	154	449	2405	0.24	60	14	5
03C	04	847	1	5	2	2	2	109.6	2.4	4162	10042	43	164	621	2158	0.26	59	11	10
03C	04	847	1	6	2	2	3	111.5	2.3	4140	9699	47	170	648	2256	0.27	59	18	5
03C	04	847	1	7	2	3	3	112.7	2.7	4119	10980	54	171	672	2182	0.27	58	21	8
03C	04	847	1	8	2	3	3	114.2	3.3	4097	13531	54	172	623	2281	0.27	58	20	4
03C	04	847	1	9	2	3	3	114.9	2.5	4078	10123	50	142	599	2405	0.22	58	24	3
03C	04	847	1	10	2	3	4	115.8	2.7	4058	10781	64	170	670	2108	0.27	57	18	12
03C	04	847	1	11	2	4	4	117.4	2.4	4036	9527	54	169	648	2306	0.27	57	24	3
03C	04	847	1	12	2	4	4	118.9	2.9	4015	11822	58	173	649	2405	0.27	56	21	14
03C	04	847	1	13	2	4	4	119.9	2.7	3994	10717	51	171	699	2355	0.27	56	25	7
03C	04	847	1	14	2	4	5	121.2	3.2	3973	12844	70	183	1295	1986	0.29	56	29	14
05C	04	973	1	1	2	2	2	103.2	3.1	4560	14259	74	176	877	3453	0.28	75	19	10
05C	04	973	1	2	2	2	2	104.1	3.2	4521	14637	71	169	843	3317	0.27	74	23	9
10C	04	847	1	1	2	2	2	153.2	2.3	4225	9718	39	143	538	1620	0.22	58	21	3
10C	04	847	1	2	2	2	2	167.5	2.0	4178	8488	44	170	812	1669	0.26	54	16	3
10C	04	847	1	3	2	2	2	169.5	2.4	4156	9898	49	160	517	1839	0.25	54	16	2
10C	04	847	1	4	2	2	3	171.6	3.3	4134	13558	59	169	825	1234	0.26	53	24	5
10C	04	847	1	5	2	3	3	173.3	2.3	4112	9317	41	156	460	1354	0.24	53	19	3
10C	04	847	1	6	2	3	3	176.4	2.7	4088	10892	45	171	592	1863	0.27	52	22	7
10C	04	847	1	7	2	3	3	178.1	2.5	4067	10236	46	172	638	1693	0.27	51	18	6
10C	04	847	1	8	2	3	3	181.3	2.2	4042	8878	44	164	515	1693	0.25	50	11	7
10C	04	847	1	9	2	3	5	203.9	3.1	3979	12430	52	177	829	1378	0.27	44	25	10
12C	04	847	1	1	2	2	2	130.6	2.7	4283	11448	49	173	646	2074	0.27	66	23	10
12C	04	847	1	2	2	2	2	135.0	2.6	4257	11083	41	154	548	2198	0.24	65	24	11
12C	04	847	1	3	2	2	2	139.3	2.8	4230	12041	59	164	802	2396	0.26	64	29	13
12C	04	847	1	4	2	2	2	142.3	2.7	4207	11245	48	156	675	2247	0.25	63	25	10
12C	04	847	1	5	2	2	3	150.9	2.4	4157	10175	54	177	823	2124	0.28	59	23	15
12C	04	847	1	6	2	3	3	159.8	2.6	4137	10665	59	182	915	1780	0.28	59	23	10
17C	04	847	1	7	2	3	3	160.7	2.6	4118	10864	52	176	761	1635	0.27	58	26	16
12C	04	847	1	8	2	3	4	162.7	2.4	4078	9663	56	174	741	1829	0.27	58	22	15
12C	04	847	1	9	2	4	4	163.9	3.0	4040	11919	49	170	616	1829	0.27	57	25	12
12C	04	847	1	10	2	4	4	165.9	2.5	4018	9904	54	169	726	2321	0.27	57	24	7
1																			

TABLE LV (continued)

Weapons Pass Data Ordered by Record Number
and Sequence of Pass

O2A WEAPONS PASSES

FLT	A/C	TAIL	TP	SFG	DN	ENC	EXC	TIME	NZ	WGT	NZ(W)	DVE	VE	DALT	ALT	MACH	PCIF	DANG	CANG	ROLL	PITCH
17C	04	989	1	1	1	9	9	62.1	2.3	4607	10751	49	147	714	1727	0.23	75	19	4	-3	6
17C	04	989	1	2	1	9	9	69.3	2.5	4567	11460	36	147	586	1533	0.23	72	17	14	-1	9
17C	04	989	1	3	1	9	9	82.5	2.4	4510	10682	46	145	655	1292	0.22	66	18	13	-13	7
19C	04	989	1	1	1	9	9	208.7	2.8	4271	11992	60	161	1005	5262	0.27	29	22	6	-9	6
28C	04	989	1	1	1	9	9	237.2	2.2	4247	9167	43	152	613	2641	0.24	25	15	13	-0	5
28C	04	989	1	2	1	9	9	237.8	3.0	4216	12743	45	161	611	2387	0.25	25	25	8	-10	10
28C	04	989	1	3	1	9	9	238.7	2.3	4208	9820	41	157	480	2186	0.25	25	9	14	-6	6
28C	04	989	1	4	1	9	9	243.3	2.7	4179	11257	49	147	603	1911	0.23	24	16	14	-9	8
30C	04	839	1	1	1	9	9	163.8	2.1	4352	9329	39	146	628	2873	0.23	51	25	7	-5	3
30C	04	839	1	2	1	9	9	164.3	2.2	4333	9547	46	131	653	2428	0.21	51	35	14	9	4
30C	04	839	1	3	1	9	9	165.0	2.0	4313	8474	43	125	587	2019	0.20	50	28	9	-4	3
30C	04	839	1	4	1	9	12	169.0	2.4	4187	9976	54	146	839	2843	0.23	49	31	13	10	4
32C	04	839	1	1	1	9	10	250.1	2.2	4006	8906	28	144	770	2292	0.23	15	19	6	2	3
32C	04	839	1	2	1	10	10	251.1	2.2	3967	8623	31	133	528	2058	0.21	14	27	9	-4	3
32C	04	839	1	3	1	10	11	253.8	2.7	3925	10443	31	141	612	1768	0.22	15	32	10	14	4
32C	04	839	1	4	1	11	12	254.7	2.0	3904	7826	25	127	466	1855	0.20	13	22	11	5	3
35C	04	973	1	1	2	2	2	46.4	1.8	4492	7948	52	132	493	4768	0.22	90	19	6	-5	6
35C	04	973	1	2	2	2	2	50.3	1.8	4449	7906	55	141	567	5448	0.24	90	14	8	-3	6
35C	04	973	1	3	2	2	2	58.8	2.2	4428	9756	44	141	759	5699	0.24	88	12	4	-4	10
35C	04	973	1	4	2	2	3	75.8	2.0	4384	8709	50	152	533	3600	0.24	84	20	9	0	7
38C	04	973	1	1	2	2	2	146.8	2.0	4421	8665	49	129	640	1716	0.20	56	20	1	-12	7
38C	04	973	1	2	2	2	2	159.3	3.1	4376	13377	88	175	1030	1524	0.27	52	30	9	-12	9
41C	04	973	1	1	2	2	2	94.7	1.7	4536	7779	43	137	469	5775	0.23	72	16	6	-2	6
41C	04	973	1	2	2	2	2	96.8	2.3	4513	10304	51	145	594	5775	0.24	71	25	7	24	5
41C	04	973	1	3	2	2	2	134.6	2.3	4412	10203	42	166	616	3607	0.27	60	9	7	-7	10
42C	04	989	1	1	1	10	11	52.7	2.8	4415	12162	67	178	1023	2458	0.28	78	24	18	-1	6
42C	04	989	1	2	1	11	11	54.4	2.2	4373	9669	49	173	1040	2106	0.27	77	23	3	3	4
42C	04	989	1	3	1	11	12	55.8	2.3	4352	10117	64	177	1000	1540	0.26	76	24	8	1	4
57C	04	973	1	1	2	2	2	122.4	2.2	4529	10048	36	144	500	3454	0.23	68	16	3	6	12
57C	04	973	1	2	2	2	2	126.5	2.6	4504	11533	53	164	555	3251	0.26	67	11	10	15	14
57C	04	973	1	3	2	2	2	137.3	2.3	4445	10086	7	132	115	2676	0.21	64	5	2	12	14
57C	04	973	1	4	2	2	2	138.4	2.0	4445	8832	19	141	229	2505	0.22	64	9	4	21	8
57C	04	973	1	5	2	2	2	139.4	2.5	4425	11243	21	152	254	2024	0.24	64	8	3	23	11
57C	04	973	1	6	2	2	2	142.0	3.0	4384	13214	26	143	370	2277	0.23	63	11	6	20	18
57C	04	973	1	7	2	2	2	143.4	2.9	4364	12493	26	150	314	2362	0.24	63	6	9	25	14
57C	04	973	1	8	2	2	3	168.8	2.0	4297	8538	11	153	201	2733	0.24	56	7	1	21	6
57C	04	973	1	9	2	3	3	170.5	2.8	4276	11768	19	149	230	2619	0.24	56	9	1	26	16
57C	04	973	1	10	2	3	3	188.6	3.2	4224	13325	26	163	407	3193	0.26	51	10	9	29	14
57C	04	973	1	11	2	3	4	190.2	2.5	4203	10466	62	147	574	2619	0.23	51	18	7	18	9
57C	04	973	1	12	2	4	4	232.8	2.4	4104	9765	46	139	293	3454	0.22	40	2	2	4	16
57C	04	973	1	13	2	4	5	244.3	2.0	4084	8033	21	139	172	2992	0.22	37	7	6	8	9
63C	04	989	1	1	1	9	10	73.4	2.0	4546	9172	38	139	556	2072	0.22	81	22	8	3	7
01H	04	861	1	1	2	2	2	71.8	3.1	4602	14298	54	142	614	8923	0.25	76	32	9	-13	19
01H	04	861	1	2	2	2	2	73.2	2.4	4580	10842	62	161	1010	8321	0.28	76	29	5	-2	10
01H	04	861	1	3	2	2	2	147.7	2.5	4384	10816	66	169	962	8123	0.30	52	32	1	-2	11
02H	04	861	1	1	2	2	2	57.7	2.8	4612	13043	60	148	940	9530	0.27	80	33	12	-4	14
02H	04	861	1	2	2	2	2	60.9	3.0	4586	13540	82	186	1418	8735	0.33	79	29	13	-3	11
02H	04	861	1	3	2	2	2	65.9	2.9	4555	13053	58	144	807	9663	0.24	77	26	22	4	12
02H	04	861	1	4	2	2	3	69.6	2.4	4528	10835	85	176	1363	8388	0.31	76	33	7	-5	9
02H	04	861	1	5	2	3	3	71.3	3.1	4470	13642	68	158	1080	7917	0.28	76	36	11	-1	17
02H	04	861	1	6	2	3	4	76.2	2.5	4440	10900	63	151	985	9485	0.27	74	36	12	-5	10
02H	04	861	1	7	2	4	4	78.0	2.5	4399	11183	57	177	977	9042	0.32	73	31	9	-2	9
02H	04	861	1	8	2	4	4	80.2	2.7	4376	11940	67	166	1154	8954	0.30	73	31	26	-2	11
04H	04	861	1	1	2	2	2	151.0	3.2	4436	13980	63	144	884	9140	0.24	59	24	10	-9	15
04H	04	861	1	2	2	2	2	171.5	2.9	4377	12760	44	151	845	9434	0.27	53	20	13	1	13
04H	04	861	1	3	2	2	2	175.1	2.5	4332	10906	51	152	761	9561	0.27	52	23	4	-5	10
09H	04	861	1	1	2	3	3	64.0	2.3	4524	11601	67	143	842	8632	0.25	78	26	11	-7	10
09H	04	861	1	2	2	3	3	73.2	2.6	4483	11508	64	142	844	8712	0.25	75	25	17	1	11
09H	04	861	1	3	2	3	3	75.8	2.2	4459	9837	54	136	639	8633	0.24	74	10	25	0	12
09H	04	861	1	4	2	3	4	77.1	2.6	4437	11391	74	156	993	8279	0.28	74	14	29	1	12
09H	04	861	1	5	2	4	4	82.4	3.3	4406	14434	82	154	1036	8358	0.27	72	34	17	1	16
09H	04	861	1	6	2	4	4	84.0	2.8	4384	12072	79	152	989	8162	0.27	71	25	20	2	13
10H	04	861	1	1	2	3	3	114.3	2.5	4357	10752	69	147	762	8693	0.26	58	28	9	-6	11
10H	04	861	1	2	2	3	3	124.5	2.6	4330	11364	72	165	1128	7605	0.29	54	26	9	-6	11
10H	04	861	1	3	2	3	3	127.3	2.9	4304	12388	70	163	1087	7567	0.28	53	32	20	-2	13
10H	04	861	1	4	2	3	4	130.9	3.3	4277	14276	105	181	1478	7415	0.31	52	31	22	-2	12
10H	04	861	1	5	2	4	4	132.1	2.7	4255	11559	75	155	981	7339	0.27	51	33	25	-3	11
10H	04	861	1	6	2	4	4	133.6	2.9	4233	12078	44	157	916	7151	0.27	51	26	20	-4	13
10H	04	861	1	7	2	4	4	134.4	3.0	4213	12492	98	178	1681	6192	0.30	50	30	16	-0	12
10H	04	861	1	8	2	4	5	136.1	2.4	4191	9923	57	134	600	6815	0.23	50	24	21	-1	10
16H	04	989	1	1	1	9	9	176.1	2.9	4408	12838	47	148	660	3605	0.24	47	23	14	-11	19
16H	04	989	1	2	1	9	10	180.5	3.0	4380	13149	58	1								

TABLE LV (concluded)

Weapons Pass Data Ordered by Record Number
and Sequence of Pass

02A WFAFONS PASSES																					
FLT	A/C	TAIL	TP	SFO	DN	ENC	EXC	TIME	NZ	WGT	NZ(W)	DVE	VF	DALT	ALT	MACH	PCIF	DANG	CANG	RQLL	PITCH
30D	04	861	1	1	2	2	2	22.5	1.8	4711	8546	24	124	214	296	0.19	94	2	5	1	10
30D	04	861	1	2	2	2	2	25.1	2.1	4688	9718	26	135	153	509	0.21	93	1	7	1	12
30D	04	861	1	3	2	2	2	27.4	3.2	4665	14964	44	150	463	509	0.23	93	15	11	9	18
30D	04	861	1	4	2	2	3	28.6	2.8	4645	12951	49	155	531	817	0.24	92	12	13	3	13
30D	04	861	1	5	2	3	3	31.1	3.3	4604	15222	51	162	596	910	0.25	92	13	20	-8	17
30D	04	861	1	6	2	3	3	32.5	3.3	4583	14983	62	164	790	1034	0.25	91	18	21	-2	17
30D	04	861	1	7	2	3	3	34.6	3.3	4561	15136	67	176	825	1159	0.27	91	24	7	0	13
30D	04	861	1	8	2	3	4	35.2	3.2	4524	14399	83	171	950	1034	0.25	90	12	13	6	20
31D	04	973	1	1	2	2	2	135.4	3.1	4518	14192	110	181	1250	7472	0.31	67	29	14	-2	11
36D	04	861	1	1	2	3	3	29.2	1.9	4626	8733	51	133	744	1898	0.21	92	15	3	-3	8
36D	04	861	1	2	2	3	3	31.2	2.1	4604	9714	45	134	744	1866	0.21	91	22	4	0	9
36D	04	861	1	3	2	3	3	33.3	1.9	4581	8932	43	132	712	1898	0.21	91	12	1	0	10
36D	04	861	1	4	2	3	4	35.6	1.8	4559	8157	43	129	685	2187	0.20	90	21	3	-0	6
36D	04	861	1	5	2	4	4	38.0	2.2	4536	10130	29	138	712	1898	0.22	90	14	6	1	10
36D	04	861	1	6	2	4	4	39.8	1.6	4514	7410	37	123	587	2252	0.19	89	15	8	-2	6
36D	04	861	1	7	2	4	4	42.0	1.6	4492	7317	-10	112	250	1015	0.17	89	4	1	14	-1
36D	04	861	1	8	2	4	5	42.6	1.7	4473	7452	-4	106	339	584	0.16	88	15	4	0	6
38D	04	861	1	1	2	3	3	104.9	2.1	4453	9341	76	161	779	1881	0.25	68	20	15	1	8
38D	04	861	1	2	2	3	3	106.8	2.2	4431	9787	75	160	876	1849	0.25	68	18	13	1	8
38D	04	861	1	3	2	3	3	109.8	2.5	4406	11145	44	147	488	2138	0.23	67	20	14	4	12
38D	04	861	1	4	2	3	3	111.2	2.8	4385	12174	50	165	681	1913	0.26	67	23	18	-2	14
38D	04	861	1	5	2	3	3	118.9	2.7	4350	11540	26	148	653	2138	0.23	64	21	8	-12	14
38D	04	861	1	6	2	3	4	120.5	2.5	4329	10682	29	141	555	2171	0.22	64	21	12	-3	15
38D	04	861	1	7	2	4	4	122.1	2.4	4307	10204	33	146	588	2203	0.23	63	20	8	-13	11
38D	04	861	1	8	2	4	5	123.9	2.6	4285	10945	27	144	556	2235	0.23	63	21	12	0	15
45D	04	861	1	1	2	2	2	23.1	2.7	4711	12846	76	159	794	2220	0.25	89	17	14	6	15
45D	04	861	1	2	2	2	2	25.1	2.9	4686	13413	71	156	692	2089	0.25	88	21	24	1	15
45D	04	861	1	3	2	2	2	27.1	2.6	4661	12307	72	154	758	2089	0.24	87	19	22	0	12
45D	04	861	1	4	2	2	3	29.4	2.9	4635	13966	80	162	701	2781	0.26	86	19	28	0	14
45D	04	861	1	5	2	3	3	30.6	3.4	4613	15764	83	177	936	2681	0.28	85	24	30	1	16
45D	04	861	1	6	2	3	3	31.9	3.7	4590	16876	84	189	1071	2615	0.30	85	23	33	0	17
45D	04	861	1	7	2	3	3	33.3	3.6	4567	16453	96	185	1145	2814	0.29	84	26	28	0	17
53D	04	861	1	1	2	3	3	59.6	2.4	4613	10981	62	152	760	2087	0.24	83	22	4	25	12
53D	04	861	1	2	2	3	3	60.6	2.5	4593	11447	65	149	620	1730	0.23	83	21	6	1	12
53D	04	861	1	3	2	3	3	62.5	2.9	4571	13098	77	164	886	1795	0.26	82	25	10	3	12
53D	04	861	1	4	2	3	4	66.7	2.8	4544	12908	67	159	955	1860	0.25	81	29	9	1	12
53D	04	861	1	5	2	4	4	70.5	2.7	4500	12111	71	167	895	2186	0.26	80	29	3	8	11
67D	04	80	1	1	2	2	2	96.5	2.9	4547	12959	72	154	803	8059	0.27	74	23	16	3	9
67D	04	80	1	2	2	2	3	110.7	2.5	4483	11237	64	147	771	8001	0.26	70	21	12	13	6
67D	04	80	1	3	2	3	3	139.4	2.8	4389	12426	86	161	968	8503	0.29	62	26	9	-10	7
69D	04	993	1	1	2	2	2	187.2	3.3	4194	13790	66	166	1074	2122	0.26	46	30	16	8	16
69D	04	993	1	2	2	2	2	201.8	2.8	4145	11629	63	162	855	2379	0.26	42	31	14	5	15
71D	04	993	1	1	2	2	2	83.0	1.8	4337	7825	61	185	1085	8525	0.33	68	15	5	-8	6
71D	04	993	1	2	2	2	2	85.1	1.9	4313	8283	89	178	1729	7606	0.31	67	20	8	3	7
71D	04	993	1	3	2	2	2	86.7	2.1	4290	9083	80	181	2082	6221	0.31	67	25	5	3	8
71D	04	993	1	4	2	2	3	87.6	2.8	4270	11940	64	194	1524	4457	0.32	66	28	13	-1	13
71D	04	993	1	5	2	3	3	90.0	3.0	4245	12706	64	161	920	1897	0.25	66	33	15	1	16
72D	04	861	1	1	2	2	2	48.9	2.7	4509	12191	47	165	824	735	0.25	89	21	10	-2	13
72D	04	861	1	2	2	2	2	51.1	3.2	4487	14365	48	172	986	766	0.26	88	25	17	8	15
72D	04	861	1	3	2	2	2	53.8	2.6	4465	11683	48	168	1051	766	0.26	88	24	10	11	11
72D	04	861	1	4	2	2	2	56.2	2.8	4442	12454	57	165	1178	704	0.25	87	27	11	3	12
72D	04	861	1	5	2	2	3	61.4	3.1	4416	13752	59	184	1318	923	0.28	86	29	16	12	13
72D	04	861	1	6	2	3	3	62.6	1.9	4360	8372	50	157	992	955	0.24	85	14	8	0	7
72D	04	861	1	7	2	3	3	70.6	3.5	4310	14923	72	189	1383	923	0.29	84	32	21	-1	16
72D	04	861	1	8	2	3	4	72.2	3.3	4289	14212	71	181	1431	548	0.28	83	30	14	-2	16
72D	04	861	1	9	2	4	4	84.4	2.1	4251	8955	28	154	990	892	0.24	80	16	7	8	7
72D	04	861	1	10	2	4	4	92.3	3.0	4219	12615	55	181	1213	766	0.28	79	27	10	12	13
72D	04	861	1	11	2	4	5	93.3	2.6	4199	11093	63	162	1141	579	0.25	78	24	12	9	18
76D	04	80	1	1	2	2	2	109.0	2.2	4260	9208	50	144	672	4357	0.24	64	23	3	-8	3
76D	04	80	1	2	2	2	2	111.5	2.1	4236	8723	33	129	414	4536	0.21	63	16	1	-6	4
76D	04	80	1	3	2	2	2	113.9	1.8	4213	7539	13	111	453	3700	0.18	63	17	2	-0	2
76D	04	80	1	4	2	2	3	143.7	2.0	4123	8222	50	137	707	4742	0.23	53	19	7	-7	3
93D	04	990	1	1	2	2	2	306.1	2.4	4005	9750	23	179	199	1850	0.28	21	6	2	3	13
93D	04	990	1	2	2	2	2	314.9	2.4	3971	9535	35	165	196	1484	0.26	18	3	2	7	14
94D	04	993	1	1	2	2	2	41.4	3.1	4492	14007	88	180	1010	2364	0.28	87	33	11	2	14
13E	04	989	1	1	1	9	9	70.8	2.0	4660	9271	24	135	399	1725	0.21	82	19	3	4	10
13E	04	989	1	2	1	9	9	74.4	2.0	4618	9352	44	142	594	1626	0.22	81	17	2	3	10
13E	04	989	1	3	1	9	10	151.4	1.0	4453	4573	-2	122	0	2326	0.19	61	0	1	4	2
13E	04	989	1	4	1	10	10	156.7	2.1	4389	9324	42	153	797	1478	0.24	59	21	11	4	8
13E	04	989	1	5	1	10	10	157.7	1.8	4351	7756	38	149	645	1429	0.23	59	17	8	6	6
13E	04	989	1	6	1	10	11	159.2	1.0	4331	4369	-10	117	-201	2250	0.18	59	0	5	4	1
29E																					

TABLE LVI

Weapons Pass Data Ordered by Ascending Value
of Peak n_z and Pass Type

02A WEAPONS PASSES																					
FLT	A/C	TAIL	TP	SFO	DN	FNC	EXC	TIME	NZ	WGT	NZ (W)	DVF	VE	DALT	ALT	MACH	PCIF	DANG	CANG	ROLL	PITCH
13E	04	989	1	3	1	9	10	151.4	1.0	4453	4573	-2	122	0	2326	0.19	61	0	1	4	2
13E	04	989	1	6	1	10	11	159.2	1.0	4331	4369	-10	117	-201	2250	0.18	59	0	5	4	1
27D	04	861	1	6	2	4	5	26.5	1.4	4504	6521	19	130	267	3202	0.21	90	9	2	0	4
27D	04	861	1	5	2	3	4	25.0	1.5	4527	6722	5	119	33	3368	0.19	91	4	0	0	6
49A	04	973	1	2	2	2	2	114.8	1.6	4262	6980	27	112	319	2710	0.18	64	13	5	8	6
36D	04	861	1	6	2	4	4	39.8	1.6	4514	7410	37	123	587	2252	0.19	89	15	8	14	-1
36D	04	861	1	7	2	4	4	42.0	1.6	4492	7317	-10	112	250	1015	0.17	89	4	1	-2	6
29F	04	993	1	3	2	2	2	108.2	1.6	4270	6946	48	151	732	2183	0.24	62	19	6	-3	11
72A	04	856	1	3	2	2	3	82.3	1.7	4352	7326	28	111	223	6345	0.19	73	8	3	17	10
72A	04	856	1	4	2	3	3	86.1	1.7	4307	7348	30	129	192	6473	0.22	72	6	6	-4	-0
77A	04	48	1	9	2	3	3	147.2	1.7	4122	7035	46	130	481	2293	0.20	64	22	12	0	6
97A	04	856	1	1	2	2	2	259.6	1.7	4093	7075	18	126	164	7069	0.22	33	4	2	4	7
41C	04	973	1	1	2	2	2	94.7	1.7	4536	7779	43	137	469	5775	0.23	72	16	6	-2	6
24D	04	989	1	3	1	10	10	184.6	1.7	4309	7197	17	138	348	1758	0.21	50	12	8	1	7
36D	04	861	1	8	2	4	5	42.6	1.7	4473	7452	-4	106	339	584	0.16	88	15	4	0	6
49A	04	973	1	7	2	3	3	182.3	1.8	3981	7215	20	144	494	2913	0.23	43	17	6	-1	6
97A	04	856	1	3	2	2	2	261.3	1.8	4054	7468	9	107	33	7037	0.18	32	5	2	-8	10
16C	04	839	1	1	1	9	9	115.0	1.8	4586	8372	23	134	501	2173	0.21	72	21	5	-4	2
35C	04	973	1	1	2	2	2	46.4	1.8	4492	7948	52	132	493	4768	0.22	90	19	6	-5	6
35C	04	973	1	2	2	2	2	50.3	1.8	4469	7906	55	141	567	5448	0.24	90	14	8	-3	6
24D	04	989	1	4	1	10	10	185.5	1.8	4289	7777	27	136	595	1511	0.21	49	16	12	3	8
25D	04	989	1	5	1	11	12	197.7	1.8	4164	7439	32	150	720	1496	0.23	43	11	9	9	7
30D	04	861	1	1	2	2	2	22.5	1.8	4711	8546	24	124	214	296	0.19	94	2	5	1	10
36D	04	861	1	4	2	3	4	35.6	1.8	4559	8157	43	129	685	2187	0.20	90	21	3	-0	6
71D	04	993	1	1	2	2	2	83.0	1.8	4337	7825	61	185	1085	8525	0.33	68	15	5	-8	4
76D	04	60	1	3	2	2	2	113.9	1.8	4213	7539	13	111	453	3700	0.18	63	17	2	10	2
13F	04	989	1	5	1	10	10	157.7	1.8	4351	7756	38	149	645	1429	0.23	59	17	8	6	6
29E	04	993	1	4	2	2	3	109.3	1.8	4249	7587	51	159	803	2038	0.25	61	23	4	-2	12
72A	04	856	1	1	2	2	2	70.1	1.9	4418	8492	38	151	512	6282	0.26	77	7	5	2	5
36D	04	861	1	1	2	3	3	29.2	1.9	4626	8733	51	133	744	1898	0.21	92	15	3	-3	8
36D	04	861	1	3	2	3	3	33.3	1.9	4581	8932	43	132	712	1898	0.21	91	12	1	0	10
71D	04	993	1	2	2	2	2	85.1	1.9	4313	8283	89	178	1729	7606	0.31	67	29	8	3	7
72D	04	861	1	6	2	3	3	62.6	1.9	4360	8372	50	157	992	955	0.24	85	14	8	0	7
67A	04	973	1	1	2	2	3	55.5	2.0	4447	8883	29	167	672	7413	0.29	57	6	4	-1	8
72A	04	856	1	6	2	3	3	92.5	2.0	4256	8471	31	126	191	6377	0.21	70	6	9	23	14
97A	04	856	1	2	2	2	2	260.6	2.0	4073	8246	21	123	229	7004	0.21	32	13	2	-9	8
84B	04	973	1	2	2	2	3	67.4	2.0	4587	9304	59	152	1065	5592	0.25	83	24	3	5	7
84B	04	973	1	3	2	3	3	68.5	2.0	4567	9309	65	154	844	4286	0.25	83	28	6	0	8
10C	04	839	1	2	2	2	2	157.5	2.0	4178	8488	44	170	812	1669	0.26	54	16	3	18	5
30C	04	839	1	3	1	9	9	165.0	2.0	4313	8474	43	125	587	2019	0.20	50	28	9	-4	3
32C	04	839	1	4	1	11	12	75.8	2.0	4384	8709	50	152	533	3600	0.24	84	20	9	0	7
35C	04	973	1	4	2	2	2	146.8	2.0	4421	8665	49	129	640	1716	0.20	56	20	1	-12	7
38C	04	973	1	1	2	2	2	138.4	2.0	4445	8832	19	141	229	2505	0.22	64	9	4	21	8
57C	04	973	1	4	2	2	2	168.8	2.0	4297	8538	11	153	201	2733	0.24	56	7	1	21	6
57C	04	973	1	8	2	2	3	244.3	2.0	4064	8033	21	139	172	2992	0.22	37	7	6	8	9
57C	04	973	1	13	2	4	5	73.4	2.0	4546	9172	38	139	556	2072	0.22	81	22	8	3	7
63C	04	989	1	1	1	9	10	73.4	2.0	4546	9172	38	139	556	2072	0.22	81	22	8	3	7
76D	04	60	1	4	2	2	3	143.7	2.0	4123	8222	50	137	707	4742	0.23	53	19	7	-7	3
13E	04	989	1	1	1	9	9	70.8	2.0	4660	9271	24	135	399	1725	0.21	82	19	3	4	10
13E	04	989	1	2	1	9	9	74.4	2.0	4618	9352	44	142	599	1626	0.22	81	17	2	5	10
18A	04	847	1	1	2	2	2	92.5	2.1	4310	9108	52	145	534	2129	0.23	72	34	5	5	8
49A	04	973	1	4	2	2	3	163.8	2.1	4113	8725	58	134	586	3087	0.21	49	16	5	9	11
72A	04	856	1	2	2	2	2	77.4	2.1	4382	9321	21	104	257	6505	0.18	75	9	6	30	15
72A	04	856	1	5	2	3	3	91.3	2.1	4277	9097	33	131	350	6250	0.22	70	9	8	-13	9
77A	04	48	1	8	2	3	3	146.1	2.1	4142	8858	43	135	563	2097	0.21	64	26	9	-3	9
88A	04	847	1	8	2	3	3	141.1	2.1	4277	9075	63	151	736	1772	0.24	58	23	3	2	7
139	04	856	1	1	2	2	2	148.3	2.1	4200	8935	37	148	388	6626	0.25	47	6	6	-7	9
79E	04	973	1	3	2	2	2	69.2	2.1	4401	9287	78	184	1174	3553	0.30	83	18	7	-8	7
03C	04	847	1	4	2	2	2	108.5	2.1	4182	8742	36	154	449	2405	0.24	60	14	5	-14	6
30C	04	839	1	1	1	9	9	163.8	2.1	4352	9329	39	146	628	2873	0.23	51	25	7	-5	3
25D	04	059	1	3	1	10	11	191.0	2.1	4259	8751	29	138	722	1595	0.22	45	22	9	-2	9
27D	04	861	1	1	2	3	3	18.0	2.1	4635	9651	58	143	639	3268	0.23	93	17	14	0	9
30D	04	861	1	2	2	2	2	25.1	2.1	4688	9718	26	135	153	509	0.21	93	1	7	1	12
36D	04	861	1	2	2	3	3	31.2	2.1	4604	9714	45	134	744	1866	0.21	91	22	4	0	9
38D	04	861	1	1	2	3	3	104.9	2.1	4453	9341	76	161	779	1881	0.25	68	20	15	1	8
71D	04	993	1	3	2	2	2	86.7	2.1	4290	9083	80	181	2082	6221	0.31	67	25	5	3	8
72D	04	861	1	9	2	4	4	84.4	2.1	4251	8955	28	154	990	892	0.24	80	14	7	8	7
76D	04	60	1	2	2	2	2	111.5	2.1	4236	8723	33	129	414	4536	0.21	63	16	1	-6	4
13E	04	989	1	4	1	10	10	156.7	2.1	4389	9324	42	153	797	1478	0.24	59	21	11	4	8
29E	04	993	1	1	2	2	2	106.2	2.1	4311	8840	50	156	923	2547	0.25	62	27	7	3	11
29E	04	993	1	2	2	2	2	107.2	2.1	4290	9214	70	162	918	2291	0.25	62	31	13	-3	15
68A	04	48	1	2	2	2	2	99.0	2.2	4277	9245	54	1								

TABLE LVI (continued)

Weapons Pass Data Ordered by Ascending Value
of Peak n_z and Pass Type

02A WEAPONS PASSES																					
FLT	A/C	TAIL	TP	SFO	DN	ENC	EXC	TIME	NZ	HGT	NZ(W)	DVF	VE	DALT	ALT	MACH	PCIF	DANG	CANG	ROLL	PITCH
36D	04	851	1	5	2	4	4	38.0	2.2	4534	10130	29	138	712	1898	0.22	90	14	6	1	10
38D	04	861	1	2	2	3	3	106.8	2.2	4431	9787	75	160	876	1849	0.25	68	18	13	1	8
76D	04	80	1	1	2	2	2	104.0	2.2	4260	9208	50	144	672	4397	0.24	64	23	3	-8	3
37A	04	847	1	2	1	9	10	30.4	2.3	4545	10499	82	171	937	2044	0.27	83	22	13	-1	8
75A	04	48	1	4	2	2	2	95.8	2.3	4277	9887	45	150	716	1534	0.23	78	29	7	-9	11
88A	04	847	1	9	2	3	4	143.4	2.3	4254	9755	72	166	941	1172	0.26	57	20	14	6	7
46B	04	847	1	1	2	2	2	116.9	2.3	4286	10009	57	158	658	1937	0.25	66	17	14	5	10
66B	04	847	1	4	2	2	3	104.8	2.3	4194	9519	51	151	914	1329	0.23	61	24	7	11	11
80B	04	973	1	8	2	3	4	223.8	2.3	4033	9155	60	156	567	1922	0.24	67	14	11	-9	8
92B	04	847	1	4	2	2	3	121.2	2.3	4235	9704	46	156	648	2256	0.27	59	18	5	29	4
03C	04	847	1	6	2	2	3	111.5	2.3	4140	9699	47	170	538	1620	0.22	58	21	3	14	7
10C	04	847	1	1	2	2	2	153.2	2.3	4225	9718	39	143	538	1620	0.22	58	21	3	-7	5
10C	04	847	1	5	2	3	3	173.3	2.3	4112	9317	41	156	460	1354	0.24	53	19	3	-3	6
17C	04	989	1	1	1	9	9	62.1	2.3	4607	10751	49	147	714	1727	0.23	75	19	4	-6	6
28C	04	989	1	3	1	9	9	238.7	2.3	4208	9820	41	157	480	2186	0.25	25	9	14	-6	6
41C	04	973	1	2	2	2	2	96.8	2.3	4513	10304	51	145	594	5775	0.24	71	25	7	24	5
41C	04	973	1	3	2	2	2	134.8	2.3	4412	10203	42	166	616	3607	0.27	60	9	7	-3	10
42C	04	989	1	3	1	11	12	55.6	2.3	4352	10117	64	177	1000	1560	0.28	76	24	8	1	4
57C	04	973	1	3	2	2	2	137.3	2.3	4465	10086	7	132	115	2676	0.21	64	5	2	12	14
09D	04	861	1	1	2	3	3	64.0	2.3	4524	10601	67	143	842	8633	0.25	78	11	-7	10	10
25D	04	989	1	1	1	9	10	187.7	2.3	4347	10097	41	149	673	1619	0.23	46	24	9	11	10
27D	04	861	1	3	2	3	3	20.9	2.3	4574	10489	66	159	829	2706	0.25	92	23	13	0	9
18A	04	847	1	4	2	2	2	98.0	2.4	4243	10168	41	123	361	1937	0.19	71	16	4	3	10
19A	04	847	1	1	2	2	2	42.6	2.4	4407	10709	47	149	705	1516	0.23	85	30	6	-3	11
37A	04	847	1	1	1	9	9	27.3	2.4	4576	10766	41	138	446	2435	0.22	85	20	9	-2	11
37A	04	847	1	3	1	10	10	31.2	2.4	4524	10996	44	141	709	1874	0.22	83	22	14	-9	10
49A	04	973	1	1	2	2	2	113.0	2.4	4302	10187	49	128	492	2595	0.20	64	19	9	5	11
75A	04	48	1	3	2	2	2	52.9	2.4	4301	10114	29	148	471	1835	0.27	71	33	19	0	9
77A	04	48	1	2	2	2	2	117.0	2.4	4302	10172	71	174	1019	2097	0.27	71	33	19	0	9
88A	04	847	1	4	2	2	2	126.3	2.4	4381	10348	34	142	557	1458	0.22	62	15	6	3	11
88A	04	847	1	6	2	3	3	131.4	2.4	4334	10311	48	149	512	1699	0.23	61	23	9	1	10
90A	04	48	1	1	2	2	2	133.1	2.4	4198	9884	66	143	708	2199	0.23	55	28	5	-5	10
90A	04	48	1	6	2	3	3	140.0	2.4	4073	9829	65	161	679	2171	0.25	52	24	5	39	8
46B	04	847	1	2	2	2	2	118.2	2.4	4265	10108	57	165	679	1793	0.26	66	18	12	9	11
46B	04	847	1	3	2	2	2	121.3	2.4	4240	10159	52	153	706	1889	0.24	65	25	16	4	10
46B	04	847	1	7	2	3	3	128.5	2.4	4153	10165	65	166	730	1865	0.26	63	22	17	4	10
03C	04	847	1	5	2	2	2	109.6	2.4	4162	10042	43	164	621	2158	0.26	59	11	10	-13	7
03C	04	847	1	11	2	4	4	117.4	2.4	4036	9527	54	169	648	2306	0.27	57	24	3	-1	6
10C	04	847	1	3	2	2	2	169.5	2.4	4156	9848	49	160	517	1839	0.25	54	16	2	15	6
12C	04	847	1	5	2	2	3	158.9	2.4	4157	10175	54	177	823	2124	0.28	59	23	15	31	5
12C	04	847	1	8	2	3	4	162.7	2.4	4078	9848	54	174	741	1829	0.27	58	22	15	7	5
17C	04	989	1	3	1	9	9	62.5	2.4	4510	10682	46	145	655	1292	0.22	66	18	13	-13	7
30C	04	839	1	4	1	9	12	169.0	2.4	4187	9974	54	146	839	2843	0.23	49	31	13	10	4
57C	04	973	1	12	2	4	4	232.8	2.4	4104	9765	-6	139	293	3454	0.22	40	2	2	4	16
01D	04	861	1	2	2	2	2	73.2	2.4	4580	10842	62	161	1010	8321	0.28	76	29	5	-2	10
02D	04	861	1	4	2	2	3	69.6	2.4	4528	10835	85	176	1363	8388	0.31	76	33	7	-5	9
10D	04	861	1	8	2	4	5	136.1	2.4	4191	9923	57	134	600	6815	0.23	50	24	21	-1	10
24D	04	989	1	2	1	9	10	161.2	2.4	4361	10402	42	150	742	1364	0.23	50	21	9	7	12
25D	04	989	1	2	1	10	10	168.9	2.4	4308	10200	41	146	671	1545	0.23	46	23	8	10	10
27D	04	861	1	2	2	3	3	19.3	2.4	4596	10998	62	152	733	2938	0.24	93	19	16	2	11
35D	04	861	1	7	2	4	4	122.1	2.4	4307	10204	33	146	588	2203	0.23	63	20	8	-13	11
53D	04	861	1	1	2	3	3	59.6	2.4	4613	10981	62	152	760	2087	0.24	83	22	4	25	12
93D	04	990	1	1	2	2	2	306.1	2.4	4005	9750	23	179	199	1850	0.28	21	6	2	3	13
93D	04	990	1	2	2	2	2	314.9	2.4	3971	9535	35	160	196	1484	0.26	18	3	2	7	14
18A	04	847	1	3	2	2	2	97.1	2.5	4263	10727	67	150	719	1628	0.23	71	29	10	4	11
19A	04	847	1	9	2	3	4	111.9	2.5	4071	10070	48	143	718	1039	0.22	62	28	14	2	11
20A	04	973	1	12	2	4	4	208.1	2.5	3924	9735	35	136	397	2354	0.22	37	16	15	5	13
36A	04	847	1	5	2	10	10	36.5	2.5	4671	11097	53	143	586	1884	0.22	8	18	14	3	11
48A	04	973	1	1	2	2	2	178.1	2.5	4241	10785	59	154	825	3108	0.25	56	21	12	2	12
79A	04	48	1	4	2	2	3	109.3	2.5	4193	10324	39	148	504	1920	0.23	61	17	19	-6	11
79A	04	48	1	5	2	3	3	110.5	2.5	4172	10395	42	140	648	2059	0.22	61	27	13	-4	12
88A	04	847	1	2	2	2	2	120.1	2.5	4431	10883	27	137	371	2236	0.22	64	21	7	5	10
90A	04	48	1	2	2	2	2	134.1	2.5	4178	10574	61	142	674	1920	0.22	54	26	8	6	12
90A	04	48	1	3	2	2	3	135.4	2.5	4139	10272	56	143	674	1948	0.22	54	28	9	1	11
90A	04	48	1	4	2	3	3	136.7	2.5	4117	10219	58	165	588	1865	0.26	53	23	14	-3	9
90A	04	48	1	7	2	3	3	142.0	2.5	4050	10012	56	148	707	2143	0.23	52	28	7	-1	11
90A	04	48	1	9	2	3	3	144.2	2.5	4009	10067	59	161	679	2199	0.25	51	23	17	-4	10
92A	04	973	1	5	2	3	4	112.9	2.5	4163	10200	43	152	866	1167	0.23	68	24	6	-3	11
46B	04	847	1	9	2	3	3	131.7	2.5	4110	10167	51	165	613	2179	0.26	62	18	8	-21	11
79B	04	973	1	1	2	2	2	54.8	2.5	4463	11337	56	189	1142	3525	0.31	87	22	6	-3	10
80B	04	973	1	3	2	2	2	60.6	2.5	4417	10998	61	159	781	3673	0.26	85				

TABLE LVI (continued)

Weapons Pass Data Ordered by Ascending Value
of Peak n_z and Pass Type

02A WFAPOH5 PASSES

FLT	A/C	TAIL	TP	SFO	DN	ENC	EXC	TIME	NZ	WGT	NZ(W)	DVF	VE	DALT	ALT	MACH	PCIF	DANG	CANG	ROLL	PITCH
24D	04	989	1	1	1	9	9	180.1	2.5	4381	11115	45	157	846	1487	0.24	51	22	13	10	12
38D	04	861	1	3	2	3	3	109.8	2.5	4406	11145	44	147	488	2138	0.23	67	20	14	4	12
38D	04	861	1	6	2	3	4	120.5	2.5	4329	10682	29	141	555	2171	0.22	64	21	12	-3	15
53D	04	861	1	2	2	3	3	60.6	2.5	4593	11447	65	149	620	1730	0.23	63	21	6	1	12
67D	04	80	1	2	2	2	3	110.7	2.5	4483	11237	64	147	771	8001	0.26	70	21	12	13	6
19A	04	847	1	8	2	3	3	111.1	2.6	4109	10801	37	147	675	1253	0.23	62	17	5	17	11
20A	04	973	1	1	2	2	2	30.1	2.6	4496	11475	50	139	513	6602	0.24	91	21	11	5	11
20A	04	973	1	5	2	3	3	39.5	2.6	4421	11374	53	147	593	5443	0.25	88	18	15	-7	12
20A	04	973	1	7	2	3	3	56.3	2.6	4348	11498	53	143	626	5567	0.24	85	21	15	-6	12
75A	04	48	1	1	2	2	2	48.5	2.6	4362	11272	47	163	557	1945	0.26	80	31	7	5	13
75A	04	48	1	2	2	2	2	51.4	2.6	4322	11246	55	162	690	1588	0.25	79	31	13	0	11
75A	04	48	1	6	2	3	3	94.2	2.6	4156	10939	56	150	809	1890	0.24	66	25	9	-9	14
90A	04	48	1	10	2	3	4	145.9	2.6	3986	10442	50	152	627	2594	0.24	50	27	5	23	13
46B	04	547	1	8	2	3	3	130.3	2.6	4331	10753	61	161	735	2058	0.25	63	23	8	12	11
80R	04	973	1	5	2	3	3	87.2	2.6	4533	11136	58	157	725	3851	0.25	79	19	12	-10	11
85B	04	973	1	1	2	2	2	51.0	2.6	4629	11975	74	165	930	4107	0.27	87	25	10	-11	10
92B	04	847	1	1	2	2	2	116.1	2.6	4299	11267	48	155	619	2069	0.24	68	22	6	0	10
03C	04	847	1	3	2	2	2	107.4	2.6	4203	11131	40	167	522	2231	0.26	60	22	2	-6	9
12C	04	847	1	2	2	2	2	135.0	2.6	4257	11083	41	154	548	2198	0.24	65	24	11	-9	8
12C	04	847	1	6	2	3	3	159.5	2.6	4137	10665	39	182	915	1780	0.28	59	23	10	27	6
12C	04	847	1	7	2	3	3	160.7	2.6	4118	10864	52	176	761	1635	0.27	58	26	16	10	6
12C	04	847	1	12	2	4	5	167.8	2.6	3978	10358	55	175	799	2173	0.28	56	27	9	18	5
57C	04	973	1	2	2	2	2	126.5	2.6	4504	11533	53	164	555	3251	0.26	67	11	10	15	14
09D	04	861	1	2	2	3	3	73.2	2.6	4483	11508	68	142	844	8712	0.25	75	25	17	1	11
09D	04	861	1	4	2	3	4	77.1	2.6	4437	11391	74	156	993	8279	0.28	74	16	29	1	12
10D	04	861	1	2	2	3	3	124.5	2.6	4330	11384	72	165	1128	7605	0.29	54	26	9	-4	11
22D	04	989	1	2	1	10	10	177.1	2.6	4208	10940	65	152	1093	1240	0.23	42	28	11	1	14
24D	04	989	1	5	1	10	11	189.2	2.6	4237	10939	48	151	690	1291	0.23	48	23	13	10	14
25D	04	989	1	4	1	11	11	192.4	2.6	4220	10971	45	157	745	1496	0.24	45	23	13	9	12
27D	04	861	1	4	2	3	3	22.1	2.6	4552	11969	45	160	690	2313	0.25	92	22	11	-1	12
38D	04	861	1	8	2	4	5	123.9	2.6	4285	10945	27	144	556	2235	0.23	63	21	12	0	15
45D	04	861	1	3	2	2	2	27.1	2.6	4661	12307	72	154	758	2089	0.24	87	19	22	0	12
72D	04	861	1	3	2	2	2	53.8	2.6	4465	11683	48	168	1051	766	0.26	88	24	10	11	11
72D	04	861	1	11	2	4	5	93.3	2.6	4199	11093	63	162	1141	579	0.25	78	24	12	9	18
18A	04	847	1	2	2	2	2	94.0	2.7	4288	11598	50	147	456	1818	0.23	72	11	9	1	12
19A	04	847	1	2	2	2	2	48.8	2.7	4373	11645	44	155	753	1444	0.24	83	29	10	1	11
20A	04	973	1	8	2	3	3	80.3	2.7	4321	11647	38	141	465	5258	0.24	82	25	15	-15	14
20A	04	973	1	11	2	4	4	204.5	2.7	3950	10485	51	153	653	2326	0.24	39	21	14	5	11
21A	04	973	1	7	2	3	3	128.7	2.7	4197	11268	51	140	549	4709	0.23	65	22	35	-13	14
47A	04	973	1	5	2	3	3	171.3	2.7	4060	10783	36	157	719	3614	0.25	46	24	5	0	11
68A	04	48	1	3	2	2	2	99.7	2.7	4258	11378	54	143	530	2000	0.22	70	23	11	-3	13
72A	04	856	1	8	2	4	5	97.6	2.7	4172	11391	33	138	447	6282	0.23	68	13	5	9	13
92A	04	973	1	2	2	2	3	35.7	2.7	4451	11959	51	155	863	3360	0.25	90	30	4	-6	14
95A	04	856	1	3	2	2	2	82.4	2.7	4152	11102	90	180	1069	2540	0.29	51	9	5	-10	12
46B	04	847	1	5	2	3	3	125.0	2.7	4197	11537	91	180	1007	2106	0.28	64	24	24	4	11
46B	04	847	1	6	2	3	3	126.7	2.7	4175	11334	60	179	880	1937	0.28	64	22	23	0	11
46B	04	847	1	10	2	3	4	133.6	2.7	4088	11099	53	161	708	1985	0.25	62	22	19	2	13
68B	04	847	1	1	2	2	2	180.5	2.7	4152	11093	59	159	690	2243	0.25	48	22	5	41	13
79B	04	973	1	2	2	2	2	59.5	2.7	4437	12068	84	173	1944	4181	0.28	85	21	13	3	12
84B	04	973	1	1	2	2	2	55.5	2.7	4626	12557	81	162	1398	6594	0.28	86	28	21	3	11
92B	04	847	1	2	2	2	2	117.6	2.7	4278	11472	49	153	496	2192	0.24	68	22	7	13	10
03C	04	847	1	7	2	3	3	112.7	2.7	4119	10980	54	171	672	2182	0.27	58	21	8	8	6
03C	04	847	1	10	2	3	4	115.8	2.7	4058	10781	64	170	670	2108	0.27	57	18	12	-10	7
03C	04	847	1	13	2	4	4	119.9	2.7	3994	10717	51	171	699	2355	0.27	56	25	7	-11	8
10C	04	847	1	6	2	3	3	176.4	2.7	4088	10892	45	171	592	1863	0.27	52	22	7	30	8
12C	04	847	1	1	2	2	2	130.6	2.7	4283	11448	49	173	646	2074	0.27	66	23	10	-15	7
12C	04	847	1	4	2	2	2	142.3	2.7	4207	11245	48	156	675	2247	0.25	63	25	10	-12	8
13C	04	48	1	3	2	2	2	118.3	2.7	4399	12028	65	152	669	1846	0.24	60	30	24	1	4
13C	04	48	1	10	2	3	3	124.8	2.7	4257	11682	72	154	894	1474	0.24	57	21	13	4	4
28C	04	989	1	4	1	9	9	243.3	2.7	4179	11257	49	147	603	1911	0.23	24	16	14	-9	8
32C	04	839	1	3	1	10	11	253.8	2.7	3925	10443	31	141	612	1768	0.22	13	32	10	16	4
02D	04	861	1	8	2	4	4	80.2	2.7	4376	11940	67	166	1154	8954	0.30	73	31	26	-2	11
10D	04	861	1	5	2	4	4	132.1	2.7	4255	11559	75	155	961	7339	0.27	51	33	25	-3	11
38D	04	861	1	5	2	3	3	118.9	2.7	4350	11540	26	148	653	2138	0.23	64	21	8	-12	14
45D	04	861	1	1	2	2	2	23.1	2.7	4711	12846	76	159	794	2220	0.25	89	17	14	6	15
53D	04	861	1	5	2	4	4	70.5	2.7	4500	12111	71	167	895	2186	0.26	80	29	3	8	11
72D	04	861	1	1	2	2	2	48.9	2.7	4509	12191	47	165	824	735	0.25	89	21	10	-2	13
19A	04	847	1	10	2	4	4	172.6	2.8	3902	10995	40	150	662	1806	0.23	41	20	12	7	13
21A	04	973	1	1	2	2	2	74.1	2.8	4414	12483	73	162	893	4860	0.27	80	27	17	1	12
21A	04	973	1	2	2	2	2	78.2	2.8	4388	12409	51	151	574	4438	0.25	79	27	10	8	14
21A	04	973	1	5	2	3	3	109.6	2.8	4271	11816	50	134	766	4739	0.22	70	32	17	-7	16
36A	04	847	1	2																	

TABLE LVI (continued)

Weapons Pass Data Ordered by Ascending Value
of Peak n_z and Pass Type

02A WEAPONS PASSES																			
FT	A/C	TAIL	TF	SEG	DN	ENC	EXC	TIME	NZ	WGT	NZ(W)	DVE	VE	DALT	ALT	MACH	PCIF	DANG	CANG
80B	04	973	1	4	2	2	3	85.9	2.8	4353	12320	76	181	1023	3673	0.29	79	24	10
81B	04	973	1	1	2	2	2	54.8	2.8	4480	12633	60	152	764	5666	0.26	89	21	11
03C	04	847	1	2	2	7	2	106.3	2.8	4224	11922	47	177	797	2207	0.28	60	23	13
12C	04	847	1	3	2	2	2	139.3	2.8	4230	12041	59	164	802	2396	0.26	64	29	13
13C	04	48	1	2	2	2	2	114.7	2.8	4426	12592	59	154	667	1760	0.24	61	30	27
13C	04	48	1	7	2	3	3	122.2	2.8	4318	12196	62	171	792	2048	0.27	58	27	24
19C	04	989	1	1	1	9	9	208.7	2.8	4271	11992	60	161	1005	5262	0.27	29	28	6
42C	04	989	1	1	1	10	11	52.7	2.8	4415	12162	67	178	1023	2458	0.28	78	24	18
57C	04	973	1	9	2	3	3	170.5	2.8	4276	11768	19	149	230	2619	0.24	56	9	1
02D	04	861	1	1	2	2	2	57.7	2.8	4612	13043	60	148	940	9530	0.27	80	33	12
09D	04	861	1	6	2	4	4	84.0	2.8	4384	12072	79	152	989	8162	0.27	71	25	20
30D	04	861	1	4	2	2	3	28.6	2.8	4645	12951	49	158	531	817	0.24	92	12	13
38D	04	861	1	4	2	3	3	111.2	2.8	4385	12174	50	165	681	1913	0.26	67	23	18
53D	04	861	1	4	2	3	4	66.7	2.8	4544	12908	67	159	955	1360	0.25	81	29	9
67D	04	60	1	3	2	3	3	139.4	2.8	4389	12426	86	161	968	8503	0.29	62	26	9
69D	04	993	1	2	2	2	2	201.8	2.8	4145	11629	63	162	855	2379	0.26	42	31	14
71D	04	993	1	4	2	2	3	87.6	2.8	4270	11940	64	194	1524	4452	0.32	66	28	13
72D	04	861	1	4	2	2	2	56.2	2.8	4442	12454	57	165	1178	704	0.25	87	27	11
18A	04	847	1	5	2	2	3	100.6	2.9	4220	12280	77	166	817	1651	0.26	70	30	9
19A	04	847	1	6	2	3	3	64.8	2.9	4261	12412	41	146	601	1229	0.23	78	34	11
20A	04	973	1	9	2	3	3	67.3	2.9	4288	12258	56	137	620	5196	0.23	80	35	6
20A	04	9	10	2	3	3	4	144.7	2.9	4100	11887	60	160	787	5910	0.27	57	26	13
21A	04	9	4	2	2	3	3	105.1	2.9	4298	12462	54	152	681	5135	0.25	71	24	12
21A	04	973	8	2	3	3	3	133.8	2.9	4168	12001	52	149	575	4498	0.24	63	28	16
21A	04	973	11	2	3	4	4	171.6	2.9	4039	11835	69	150	828	4769	0.25	53	34	10
59A	04	48	13	2	4	4	4	146.4	2.9	3978	11547	65	158	663	1721	0.25	54	29	15
68A	04	48	1	1	2	2	2	87.1	2.9	4339	12422	31	155	441	1698	0.24	74	28	13
77A	04	48	1	3	2	2	2	121.6	2.9	4276	12544	76	189	1325	2637	0.30	70	37	12
77A	04	48	1	6	2	3	3	128.6	2.9	4210	12059	76	183	1365	2125	0.29	68	32	16
77A	04	48	1	7	2	3	3	141.0	2.9	4169	12107	75	174	1082	2321	0.28	65	35	18
88A	04	847	1	3	2	2	2	125.1	2.9	4402	12659	50	150	662	1820	0.23	62	18	9
92A	04	973	1	4	2	3	3	111.3	2.9	4202	12155	56	164	1446	1444	0.25	68	30	4
07B	04	973	1	3	2	2	2	123.0	2.9	4217	12415	52	174	744	6218	0.29	35	22	17
80B	04	973	1	7	2	3	3	94.1	2.9	4285	12297	68	177	1105	4151	0.29	77	23	11
92B	04	847	1	8	2	3	3	126.6	2.9	4152	12178	59	153	770	2069	0.24	65	34	6
03C	04	847	12	2	4	4	4	118.9	2.9	4015	11822	58	173	649	2405	0.27	56	21	14
57C	04	973	1	7	2	2	2	143.4	2.9	4364	12493	26	150	314	2362	0.24	63	6	9
07D	04	861	1	3	2	2	2	65.9	2.9	4555	13053	58	144	807	9663	0.26	77	26	22
04D	04	861	1	2	2	2	2	171.5	2.9	4377	12760	44	151	845	9434	0.27	53	20	13
10C	04	861	1	3	2	3	3	127.3	2.9	4304	12388	70	163	1087	7567	0.28	53	32	20
10D	04	861	1	6	2	4	4	133.6	2.9	4233	12078	48	157	916	7151	0.27	51	26	20
16D	04	989	1	1	1	9	9	176.1	2.9	4408	12838	47	148	660	3605	0.24	47	23	14
45D	04	861	1	2	2	2	2	25.1	2.9	4686	13413	71	156	692	2089	0.25	88	21	24
45D	04	861	1	4	2	2	3	29.4	2.9	4635	13496	80	162	701	2781	0.26	86	19	28
53D	04	861	1	3	2	3	3	62.5	2.9	4571	13098	77	164	886	1795	0.26	82	25	10
67D	04	60	1	1	2	2	2	96.5	2.9	4547	12959	72	154	803	8059	0.27	74	23	16
01A	04	847	1	1	2	2	2	39.8	3.0	4414	13382	68	167	764	2229	0.26	86	21	12
19A	04	847	1	3	2	2	2	57.6	3.0	4333	13144	36	172	953	2592	0.27	80	27	11
19A	04	847	1	7	2	3	3	107.1	3.0	4137	12408	61	181	1314	1927	0.28	63	33	16
20A	04	973	1	3	2	2	2	34.4	3.0	4468	13321	47	150	594	5474	0.25	90	33	14
20A	04	973	1	4	2	2	3	37.4	3.0	4444	13203	28	157	589	5227	0.26	89	15	27
20A	04	973	1	6	2	3	3	41.8	3.0	4398	13157	59	146	625	5536	0.24	87	23	31
20A	04	973	13	2	4	4	4	220.9	3.0	3878	11720	63	134	622	2186	0.21	34	28	19
36A	04	847	1	6	2	11	12	42.2	3.0	4380	13059	44	143	391	1957	0.22	80	16	6
75A	04	48	1	5	2	2	3	92.7	3.0	4177	12417	72	191	1118	1807	0.30	66	33	15
75A	04	48	1	8	2	3	3	100.7	3.0	4105	12492	57	160	829	1588	0.25	64	35	9
77A	04	48	1	1	2	2	2	112.6	3.0	4328	12909	74	170	972	2547	0.27	72	34	21
79A	04	48	1	3	2	2	2	100.1	3.0	4235	12880	55	158	809	1671	0.25	64	32	22
68B	04	847	1	2	2	2	2	78.1	3.0	4302	12791	75	166	1077	1093	0.26	71	26	11
79B	04	973	1	5	2	3	3	156.0	3.0	4209	12501	54	161	789	1461	0.25	62	23	16
80B	04	973	1	6	2	3	3	91.6	3.0	4307	12878	73	178	918	4151	0.29	77	18	9
92B	04	847	1	3	2	2	2	118.6	3.0	4258	12821	55	161	594	2045	0.25	68	24	6
12C	04	847	1	9	2	4	4	163.9	3.0	4046	11919	49	170	616	1829	0.27	57	25	12
13C	04	48	1	5	2	3	3	120.8	3.0	4357	13010	70	164	735	2193	0.26	59	26	14
28C	04	989	1	2	1	9	9	237.8	3.0	4210	12743	45	161	611	2387	0.25	25	25	8
57C	04	973	1	6	2	2	2	142.0	3.0	4384	13214	26	143	370	2277	0.23	63	11	6
02D	04	861	1	2	2	2	2	60.9	3.0	4586	13540	82	186	1418	8735	0.33	79	29	13
10D	04	861	1	7	2	4	4	134.4	3.0	4213	12492	98	178	1681	6192	0.30	50	30	16
16D	04	989	1	2	1	9	10	180.5	3.0	4380	11149	58	152	764	3475	0.24	46	24	29
71D	04	993	1	5	2	3	3	90.0	3.0	4245	12706	64	161	920	1897	0.25	66	33	15
72D	04	861	1	10	2	4	4	92.3	3.0	4219	12615	55	181	1213	766	0.28	79	27	10
19A	04	847	1	11	2	4	4	176.3	3.1	3874	12053	56	161	971	2246	0.25	40	28	9
49A	04	973	1	6	2	3	3	176.0	3.1	4031	12365	55	155	710	3261	0.25	45	25	4
59A	04	48	1	3	2	2	2	109.7	3.1	4243	12952	58	146	548	1503	0.23	65	30	11
79A	04	48	1	2	2	2	2	96.2	3.1	4263	13425	61	150	696	1671	0.23	66	32	16
79A	04	48	1	7	2	3	3	113.1	3.1	4129	12963	65	164	647	2004	0.26	60	2	

TABLE LVI (concluded)

Weapons Pass Data Ordered by Ascending Value
of Peak n_z and Pass Type

02A WEAPONS PASSES

FLT	A/C	TAIL	TP	SEQ	DN	ENC	EXC	TIME	NZ	WGT	NZ(W)	DVE	VE	DALT	ALT	MACH	PCIF	DANG	CANG	ROLL	PITCH
31D	04	973	1	1	2	2	2	135.4	3.1	4518	14192	110	181	1250	7472	0.31	67	29	14	-2	11
72D	04	861	1	5	2	2	3	61.4	3.1	4416	13752	59	184	1318	923	0.28	86	29	16	12	13
94D	04	993	1	1	2	2	2	41.4	3.1	4492	14007	88	180	1010	2364	0.28	87	33	11	2	14
01A	04	847	1	2	2	2	2	42.9	3.2	4388	14184	61	155	582	1721	0.24	85	27	10	-6	16
59A	04	48	1	9	2	3	3	142.9	3.2	4058	13039	71	162	642	2079	0.25	55	29	18	5	14
77A	04	48	1	5	2	3	3	125.0	3.2	4234	13376	74	154	865	1626	0.24	69	38	14	-10	17
77A	04	48	1	10	2	3	4	148.2	3.2	4102	13040	75	157	873	1930	0.25	64	39	22	-5	16
77A	04	48	1	11	2	4	4	148.5	3.2	4066	13044	70	158	807	1571	0.25	63	34	26	5	16
06B	04	973	1	1	2	2	2	96.4	3.2	4543	14729	99	185	1348	7769	0.32	70	35	28	0	12
06B	04	973	1	3	2	2	2	101.0	3.2	4481	14344	92	194	1346	7735	0.34	69	32	26	2	11
06B	04	973	1	4	2	2	3	102.6	3.2	4461	14142	79	192	1265	7500	0.33	60	23	27	1	11
06B	04	973	1	6	2	3	3	107.5	3.2	4399	14172	58	210	1149	2895	0.33	68	17	11	3	10
07B	04	973	1	2	2	2	2	113.1	3.2	4287	13723	47	193	840	3531	0.31	38	23	13	0	12
82B	04	973	1	1	2	2	2	149.5	3.2	4185	13287	67	145	749	1413	0.29	51	35	15	2	16
03C	04	847	1	14	2	4	5	121.2	3.2	3973	12844	70	183	1295	1986	0.29	56	29	14	0	9
05C	04	973	1	2	2	2	2	104.1	3.2	4521	14637	71	169	843	3310	0.27	74	23	9	-0	15
57C	04	973	1	10	2	3	3	188.6	3.2	4224	13325	26	143	407	3193	0.26	51	10	9	79	14
04D	04	861	1	1	2	2	2	151.0	3.2	4436	13980	63	144	884	9140	0.26	59	24	10	-9	15
30D	04	861	1	3	2	2	2	27.4	3.2	4665	14964	44	150	463	509	0.23	93	15	11	9	18
30D	04	861	1	9	2	3	4	35.2	3.2	4524	14399	83	171	950	1034	0.26	90	12	13	6	20
72D	04	861	1	2	2	2	2	51.1	3.2	4487	14365	48	172	986	766	0.26	82	25	17	8	15
21A	04	973	1	3	2	2	2	103.8	3.3	4318	14109	56	169	749	5350	0.28	72	27	12	-6	14
21A	04	973	1	6	2	3	3	126.4	3.3	4219	14001	71	166	950	4679	0.27	65	28	19	-11	16
21A	04	973	1	10	2	3	3	170.6	3.3	4059	13510	74	155	773	5043	0.26	53	35	11	-5	16
25A	04	973	1	5	2	3	3	99.6	3.3	4273	14058	58	159	564	2518	0.25	73	20	11	10	19
26A	04	973	1	1	2	2	2	50.0	3.3	4449	14771	62	160	1113	5260	0.27	87	28	8	9	17
59A	04	48	1	6	2	3	3	115.3	3.3	4176	13877	46	151	534	2384	0.24	64	32	9	6	19
59A	04	48	1	7	2	3	3	117.7	3.3	4152	13674	63	150	612	1941	0.24	63	27	10	-1	18
59A	04	48	1	11	2	3	3	144.6	3.3	4018	13112	54	158	523	1667	0.25	54	23	14	3	16
59A	04	48	1	14	2	4	5	147.2	3.3	3958	13075	62	149	462	1667	0.26	54	35	14	3	15
79A	04	48	1	9	2	3	3	118.2	3.3	4080	13289	60	172	652	2255	0.27	58	23	13	-2	14
92A	04	973	1	1	2	2	2	31.0	3.3	4497	14673	66	170	1126	3892	0.28	91	34	6	-3	16
46B	04	847	1	5	2	3	3	106.7	3.3	4171	13623	74	165	1101	1069	0.25	61	34	8	16	19
03C	04	847	1	8	2	3	3	114.2	3.3	4097	13531	54	172	623	2281	0.27	58	20	6	-11	8
10C	04	847	1	4	2	2	3	171.6	3.3	4134	13558	59	169	825	1234	0.26	53	24	5	-13	11
13C	04	48	1	1	2	2	2	114.2	3.3	4446	14843	67	166	643	2019	0.26	61	31	28	-8	5
13C	04	48	1	8	2	3	3	122.8	3.3	4298	14394	92	176	1078	1705	0.27	58	34	28	5	5
09D	04	861	1	5	2	4	4	82.4	3.3	4406	14434	82	154	1036	8358	0.27	72	34	17	1	16
17D	04	861	1	4	2	3	4	130.9	3.3	4277	14276	105	181	1478	7415	0.31	52	31	22	-2	12
30D	04	861	1	5	2	3	3	31.1	3.3	4604	15222	51	162	596	910	0.25	92	13	20	-8	17
30D	04	861	1	6	2	3	3	32.5	3.3	4583	14983	62	164	790	1034	0.25	91	18	21	-2	17
30D	04	861	1	7	2	3	3	34.6	3.3	4561	15136	67	176	825	1159	0.27	91	24	7	0	13
69D	04	993	1	1	2	2	3	187.2	3.3	4194	13790	66	166	1074	2122	0.26	46	30	14	8	16
72D	04	861	1	8	2	3	4	72.2	3.3	4289	14212	71	181	1431	548	0.28	83	30	14	-2	16
19A	04	847	1	4	2	2	3	60.5	3.4	4308	14664	57	181	1020	2196	0.29	79	34	10	16	15
19A	04	847	1	5	2	3	3	62.6	3.4	4285	14696	42	168	984	1757	0.26	79	37	10	4	16
25A	04	973	1	7	2	3	3	209.6	3.4	4025	13564	64	193	805	1769	0.24	44	33	7	-15	21
44A	04	973	1	8	2	3	5	217.5	3.4	3882	13185	72	150	960	4484	0.25	32	31	15	13	18
59A	04	48	1	1	2	2	2	106.1	3.4	4287	14675	67	161	688	1585	0.25	67	32	11	0	19
59A	04	48	1	5	2	3	3	116.0	3.4	4197	14409	72	165	761	2468	0.26	64	36	12	3	17
06B	04	973	1	2	2	2	2	98.0	3.4	4522	15360	103	196	1405	7500	0.34	70	31	30	6	12
07B	04	973	1	1	2	2	2	95.0	3.4	4334	14854	64	203	1303	5203	0.34	42	19	25	-3	12
66B	04	847	1	1	2	2	2	75.8	3.4	4326	14802	86	182	1124	1093	0.28	72	32	10	16	18
45D	04	861	1	5	2	3	3	30.6	3.4	4613	15764	64	177	936	2681	0.28	85	24	30	1	16
21A	04	973	1	9	2	3	3	138.6	3.5	4261	14417	67	160	877	4289	0.26	62	28	12	-15	18
59A	04	48	1	2	2	2	2	108.0	3.5	4265	14898	60	147	522	1439	0.23	64	29	17	11	20
59A	04	48	1	8	2	3	3	141.7	3.5	4079	14250	71	167	812	2106	0.26	55	35	15	5	18
75A	04	48	1	7	2	3	3	99.3	3.5	4127	14282	81	189	1239	2083	0.30	64	34	15	8	12
79A	04	48	1	1	2	2	2	95.1	3.5	4284	15005	60	166	701	1845	0.26	66	30	14	-2	17
92A	04	973	1	7	2	4	5	247.0	3.5	3827	13354	55	161	900	1333	0.25	29	26	4	5	19
95A	04	856	1	1	2	2	2	70.8	3.5	4246	14931	65	212	1340	2683	0.34	54	19	15	2	14
13C	04	48	1	4	2	2	3	118.8	3.5	4386	15243	66	168	636	1674	0.26	59	27	25	4	5
72D	04	861	1	7	2	3	3	70.6	3.5	4310	14923	72	189	784	5847	0.26	84	32	21	-1	16
20A	04	973	1	2	2	2	2	32.3	3.6	4473	16259	59	157	784	2100	0.25	90	35	26	-4	19
25A	04	973	1	3	2	2	2	94.7	3.6	4319	15590	61	162	643	2100	0.25	74	22	13	19	22
25A	04	973	1	6	2	3	3	102.0	3.6	4250	15342	77	178	815	2239	0.28	72	24	9	3	19
77A	04	48	1	12	2	4	5	148.8	3.6	4029	14508	51	140	657	1162	0.22	63	37	22	-21	23
13C	04	48	1	6	2	3	3	121.3	3.6	4338	15933	86	172	1025	1904	0.27	59	35	28	3	5
45D	04	861	1	7	2	3	3	33.3	3.6	4567	16493	96	185	1145	2814	0.29	84	26	28	0	17
25A	04	973	1	1	2	2	2	88.0	3.7	4386	16053	84	161	799	1551	0.25	76	26	11	17	21
25A	04	973	1	2	2	2	2	90.8	3.7	4344	16118	82	162	749	1769	0.25	75	16	12	-6	22
79A	04	48	1</																		

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<p>Between June 1970 and January 1971 twenty-one O-2A aircraft operating from DaNang and Bien Hoa Air Bases, Republic of Viet Nam, were each equipped with either a VGH or a multichannel recording system to establish maneuver and gust loads spectra for the O-2A aircraft operating under combat conditions. Of the 2053 hours of valid data documented in this report, all represent VGH data (air-speed, altitude, and c.g. vertical acceleration) and 708 represent multichannel data (the foregoing parameters plus pitch and roll angular rates). The data presentation includes tables and graphs of the parameters in the form of histograms, exceedance plots, and bivariate and trivariate tables. The tables list the number of parameter peaks occurring in the ranges of the given parameter and the coincident ranges of other parameters and the time spent in the coincident ranges of several parameters. Data recorded during store drops were processed separately to reflect aircraft operation during weapon deliveries. Of the 428 rocket passes recorded, 272 had acceleration peaks between 2.0g and 3.0g and only 27 had peaks over 3.5g. The instrumented aircraft, on the average, exceeded the maneuver load factor of 4.0 every 300 hours.</p>		

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